TEXTILE TECHNOLOGY DIGEST

VOLUME 18 OCTOBER 1961 NUMBER 10

ABSTRACTS

FIBERS A

Natural fibers A1

HONEYDEW ON COTTON. F. Hadwich. Melliand 42, No. 3: 143-146 (1961).
The origins of honeydew, its detection, and methods for controlling or offsetting its deleterious effects in spinning are discussed. (4388)

COTTON FIBER TEST VALUES. K.-H. Koschny. Textil-Praxis 16, No. 4: 354-356 (1961). In German. Through BCIRA 41: 2585 (1961).
Micronaire and Pressley values are listed in tables for cottons from North, Central, and South America, Africa, Asia, and Europe (1960/61 season). (4389)

SPINNING TEST REPORT ON THE EGYPTIAN COTTON CROP OF 1959. Egypt. Cotton Gaz. 41: 21 (Sept. 1960). Through BCIRA 41: 2265 (1961).
Yarn strengths and fiber properties are tabulated for the 1959 crops of the following Egyptian cottons: Giza 45, Karnak, Menoufi, Giza 47, Giza 30, Dandara, Ashmouni, and Bahteam 185 (a trial variety). (4390)

EFFECT OF SHORT FIBERS IN COTTON ON YARN, FABRIC PROPERTIES, AND SPINNING PERFORMANCE. J. D. Tallant, L. A. Fiori, and R. J. Cheatham (So. Reg. Research Lab.). Textile Bull. 87: 51-57, 70-71 (Aug. 1961).
Experimental data are presented showing that an upper limit of 3/8 in. is more valid than the 1/2 in. limit now commonly used for evaluating the effect of short fibers on spinning performance. A means of converting from one measure to the other with good accuracy, also, is presented. The deleterious effects of short fibers on yarn tenacity, yarn appearance, spinning efficiency, and on the properties and appearance of gray bleached, dyed, and resin treated fabrics are shown. 12 refs. (4391)

SEARCH FOR NEW FIBER CROPS. PART 4. KENAF COMPOSITION. H. J. Nieschlag, G. H. Nelson, and I. A. Wolff. Tappi 44: 515-516 (July 1961).
The compositional characteristics of kenaf (Hibiscus cannabinus), a tall, fast-growing annual plant adapted to many areas of the United States, indicate that it merits consideration as a source of pulp fiber. 6 refs. (4392)

Manmade fibers A2

FIBER PROGRESS IN BRITAIN. Skinner's Silk & Rayon Record 35: 728-735 (Aug. 1961).
Review of the leading manmade fibers used in Britain today, and the fabrics they are being used for. Swatches. (4393)

CHEMICAL FIBER LEXICON [CHEMIEFASER LEXIKON]. R. Bauer. Deutscher Fachverlag, Frankfurt-am-Main. 1960. 118 p. In German. Through BCIRA 41: 2090 (1961).
Short notes are presented, alphabetically, on manmade fibers (history, chemistry, economics) their production and properties, and there is a list of trade names. (4394)

PROCESSING ACRILAN ACRYLIC STAPLE ON THE COTTON SYSTEM. Chemstrand Corp., Decatur, Ala. July 1961. 49 p. A1. (4395)

PRODUCTION, PROPERTIES, PROCESSING, AND USES OF PREMNITZ-PRELANA. H. Bürger. Deut. Textiltech. 11, No. 3: 145-149 (1961). In German. Through BCIRA 41: 2480 (1961).
Production of the polyacrylonitrile fiber Prelana, its textile, physical, and chemical properties, processing (worsted and condenser spinning systems), and potential uses of the fiber are discussed, with special reference to the state of development prior to the commencement of large-scale production. (4396)

TESTING THE DYE MERGIBILITY OF SPUN YARNS OF ORLON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Aug. 1961. 2 p. Bull. OR-118 (replaces Bull. OR-73). Free.
Laboratory techniques for determining the dye mergibility of various lots of Orlon acrylic fiber and for checking the fabric hand of knitted tubing of Orlon are discussed. (4397)

TEFLON TFE AND FEP SPECIAL PURPOSE FLUOROCARBON FIBERS. Man-Made Textiles 37: 44-45 (Aug. 1961).
The properties and end-uses of TFE tetrafluoroethylene multifilament and of FEP fluorinated ethylene propylene monofilament fibers are described. (4398)

GLASS YARN IN THE TEXTILE INDUSTRY. Notiziario Tec. Tess. 10, No. 2: 49-53 (1960). In Italian. Through BCIRA 41: 1797 (1961).
The method of glass yarn production is described, with special reference to the characteristics of Vetrotex filament. Notes are given on subsequent processing, including spinning and finishing, and some new applications of the yarn are mentioned (for electrical insulation, for furnishing fabrics, and for use with polyvinyl chloride in the manufacture of netting of great strength and durability). (4399)

DU PONT MAKES NEW 501 NYLON WITH DIFFERENT DYE PROPERTY. E. I. du Pont de Nemours & Co. Daily News Record No. 170: 19 (Aug. 31, 1961).
A new continuous filament type 501 nylon with different dyeing characteristics from regular type 501 permits piece dyeing of carpets in two shades in a single dyebath. (4400)

FIBER DATA SHEETS. POLYAMIDE FIBERS. PART 2. PRODUCTION METHODS AND PROPERTIES. P.-A. Koch. Fibres and Plastics 22: 227-230 (Aug. 1961).
Melt spinning and direct spinning processes, constitution, physical properties, chemical behavior, special advantages and disadvantages, and uses are reviewed. A listing of master patents is included. 234 refs. (4401)

SOME VISCOELASTIC PROPERTIES OF NYLON. F. L. Warburton, J. F. P. James, and S. Hother-Lushington. Brit. J. Appl. Phys. 12, No. 5: 230-237 (1961). Through BCIRA 41: 2588 (1961).
The dynamic modulus of nylon fibers has been measured over a wide frequency range at different temperatures and humidities. Life times under load were also measured. The results of both sets of experiments can be explained on the assumption that increase in temperature only affects the internal friction of nylon, but that the absorption of water has also a significant, although smaller, effect on the elastic properties. (4402)

BIG-RING COMPOUNDS MAKE THEIR BID. Chem. Week 89: 93, 94, 96 (Aug. 5, 1961).
The potential uses of 1,3-cyclooctadiene (8-carbon ring) and 1,5,9-cyclododecatriene (12-carbon ring) for forming caprylolactam or the homologous 12-carbon lactam, which can be polymerized to the corresponding polyamides (nylon-8 or nylon-12) and the properties of the resultant products are discussed. (4403)

PREPARATION OF SYNTHETIC FIBERS FROM MIXTURES OF POLYVINYL ALCOHOL AND OTHER WATER-SOLUBLE POLYMERS. PART 1. FIBERS FROM MIXTURES OF POLYVINYL ALCOHOL AND VINYL METHYL ETHER/MALEIC ACID COPOLYMERS. H. Kawakami and K. Kawashima. J. Soc. Textile Cellulose Inds. Japan 17, No. 4: 325-329 (1961). In Japanese (English summary). Through BCIRA 41: 2273 (1961).
The fiber is superior to ordinary Vinylon in dyeability but inferior in tenacity. (4404)

RESISTANCE OF FIBERS PREPARED FROM MIXTURES OF POLYVINYL ALCOHOL AND POLYACRYLIC ACID TO WATER, ACID, AND ALKALI. K. Kawashima. J. Soc. Textile Cellulose Inds. Japan 17, No. 4: 330-334 (1961). In Japanese (English summary). Through BCIRA 41: 2274 (1961).
The resistance to water of the unformalized fibers improves with heat treatment; the resistance of the formalized fibers is good. The resistance to hydrochloric acid of the formalized fibers increases with increased proportion of polyacrylic acid, but the resistance to alkali decreases. (4405)

EFFECT OF SPINNING CONDITIONS ON THE STRUCTURE OF VISCOSE RAYON FILAMENTS. R. J. E. Cumberbirch, J. E. Ford, and R. E. Gee (Shirley Inst.). J. Textile Inst. 52: T330-T350 (July 1961).
Factors in the spinning of viscose rayon yarns that influence filament structure were investigated. Viscose composition, salt figure, spinning-bath temperature, and spinning-bath composition were varied; modifier (cyclohexylamine) was added to both viscose and spinning-bath in some of the experiments. The effect of these factors on the structure of viscose filaments was assessed by measurements of skin/core structure, crystallite length, moisture-sorption ratio, anisotropic-diffusion value, water retention, and tensile properties. 24 refs. (4406)

INDUSTRIAL APPLICATIONS OF DYNEL. Union Carbide Corp. Am. Textile Reptr. 75: 75-76 (Aug. 17, 1961).
Past and current industrial use of Dynel, as well as probable future developments, are summarized. (4407)

POLYAZINE FIBER. Japanese Nat. Textile Research Inst. Daily News Record No. 154: 19 (Aug. 17, 1961).
The new fiber is claimed to be closer to natural fibers than other manmade fibers. (4408)

CHALLENGE OF POLYPROPYLENE. G. S. Hooper. Textile Merc. 145: 53, 56 (July 14, 1961).
The characteristics of Prolene fibers which make it a promising addition to the manmade fiber field are summarized. (4409)

YARN PRODUCTION B

SOME CHANGES IN FILAMENT AND FIBER LOAD-EXTENSION CHARACTERISTICS WHICH RESULT FROM STRETCH-BREAKING NYLON 66 TOW ON A SEYDEL MACHINE. J. D. Watt (Brit. Nylon Spinners Ltd). J. Textile Inst. 52: T303-T308 (July 1961).
The load-extension characteristics of filaments from some nylon 66 tows were compared with those of the resulting Seydel stretch-broken fibers. The stretch-broken fibers had greater tenacity, higher initial modulus, and lower extension at break than the original filaments. (4410)

PROCESSING TREVIRA POLYESTER FIBER IN FORM OF TOW ON THE SEYDEL TEARING MACHINE. A. Kindlmann (Farbwerke Hoechst AG). Textil-Praxis (English ed.) No. 2: 49-52 (June 1961).
The operation of the Seydel machine is described, and machine adjustments for running Trevira tow are given. General technical data for the machines are included. (4411)

SPINNING SEMI-SYNTHETIC JUTE. R. Huschka (Bast Fibre Ind., Dresden). Textil-Praxis (English ed.) No. 2: 55-57 (June 1961).
Semi-synthetic jute is the commercial designation for viscose fibers of the jute type. Its characteristics and processing by means of a modified jute spinning system are described. (4412)

STUDY OF THE WORK IN SPINNING MILLS. P. Passemar. Industrie Textile: 109-116 (Feb. 1961). In French. Through BCIRA 41: 2501 (1961).
Simplification of the work by time and motion studies to improve the existing methods and eliminate sources of waste (economy of time, material, space, and energy) is discussed, details of the individual operations, fatigue coefficients, movements, etc. being tabulated (graphical symbols are introduced in the tables). (4413)

Opening, picking, fiber preparation B1

STUDIES ON RATIONALIZATION OF MANMADE STAPLE FIBER PROCESSING FOR SHORT (3 INCH) STAPLES. PART 1. BLOWING PROCESS. Y. Matsuzaki, J. Sekiguchi, and H. Miyashita. Bull. Textile Research Inst. (Japan) No. 56: 33-43 (1961). In Japanese (English summary). Through BCIRA 41: 2289 (1961).
The performance of the SKS-type opening lapper was compared with that of conventional blowroom machinery yield, staple diagram, and freedom from nep are better. (4414)

SOME RESULTS FROM EXPERIMENTS CARRIED OUT ON COTTON-COTTON BLENDS. G. Raes and T. Fransen. Ann. Sci. Textiles Belges No. 4: 7-48 (1960). In French. Through BCIRA 41: 2497 (1961).
The experiments, the results of which are presented in tables and graphs, were carried out with a view to ascertaining whether blending is of technological advantage for the production of yarns. In the first part of this study, only differences in the micronaire values of the blend components were considered. A high correlation was found between the fiber length and fineness and yarn strength properties. Shade differences during dyeing are not to be expected as a result of differences in micronaire values, provided the cottons originate from the same harvesting period. In the second part of the study, the authors examine the effect of differences in maturity and micronaire values for cotton blends from different varieties. From the general technological viewpoint, blends of cottons with the same micronaire value are of greater advantages than those with the same maturity. (4415)

SHORT CUT TO BETTER BLENDING FOR COTTON. G. L. Louis and L. A. Fiori (So. Reg. Research Lab.), and H. G. Lewis and S. C. Mayne, Jr. (Anderson, Clayton & Co.). Textile World 111: 70-71 (Aug. 1961).
Three nomographs are given for determining resultant blend fineness. The first is based on 2 fiber-fineness components in terms of % by weight; the second is based on 2 or more fiber-fineness components in terms of % by weight; and the third is used with either of the first two in dealing with actual weights or bales. (4416)

Carding and combing B2

MILLS RUN TRIALS ON NEW CARD SYSTEMS. A. T. Pedersen. Daily News Record No. 167: 20 (Aug. 28, 1961).
Two newly developed American systems are briefly noted, one consisting primarily of two cards in tandem and the other a multi-card system hooking up 4, 6, or more cards. (4417)

HIGH PRODUCTION REVOLVING FLAT CARD. Soc. Alsacienne de Constructions Mecaniques. Textile Recorder 78: 62-63 (Aug. 1961).
Basically the card follows closely the lines of a standard revolving flat card but is fitted with a controlled air flow system which includes a full width suction nozzle just below the setting point between the cylinder and doffer where the fiber transfer takes place. The result is that virtually all the fibers are taken up by the doffer at the first attempt and the risk of nep formation is reduced. Machine particulars are covered. (4418)

SAW-TOOTH WIRE IN COTTON SPINNING. F. Walz. Textil-Praxis 16, No. 4: 350-353 (1961). In German. Through BCIRA 41: 2494 (1961).
The most important tooth shapes, density (number of points per area unit), uses of saw-tooth wire, new methods of fixing the wire on the roller, the all-steel clothing, and openers with saw-tooth rollers are discussed. (4419)

AVOIDING DEFECTS DUE TO CARDING. K. J. Zwierlein. Textil-Praxis (English ed.) No. 2: 54 (June 1961).
Methods of avoiding nonuniform sliver formation due to improper card stripping and lap piecing are briefly noted. (4420)

AIR FLOW ON A CARD EQUIPPED WITH METALLIC CARD CLOTHING. PART 3. PATH OF TRASH AND LINT MOVEMENT AROUND LICKERIN. Y. Niitsu, C. Nozaki, Y. Mineo, K. Ando, S. Hasegawa, and H. Kimura. J. Textile Machy. Soc. Japan 14, No. 5: 319-328 (1961). In Japanese (English summary). Through BCIRA 41: 2291 (1961).
Pieces of trash and lint are classified by their terminal velocity (high: leaf and large seed fragments; medium: small seed fragments; low: lint). A hot-wire anemometric technique is used to study the air flow round the lickerin, and a theoretical expression is derived. The weight of lickerin waste and of lint varies with the setting of the mote knife and the lickerin screen. (4421)

INGOLSTADT AUTOMATIC SLIVER CAN-CHANGING DEVICE. F. Neeb. Melliand 42, No. 3: 148-150 (1961).
The special characteristic of the Ingolstadt can changer is the device which detaches the card sliver at each changing process between the funnel and the calender rollers. Funnels with a bore suitable for the respective material, type, and count of sliver can be fitted. The operation and construction of the changer are described in detail. (4422)

Drawing and roving B3

DEVELOPMENT OF SLIVER EQUALIZATION METHODS AND INSTALLATIONS. W. Wegener and H. Bechlenberg. Spinner u. Weber 79, No. 4: 308-322 (1961). In German. Through BCIRA 41: 2498 (1961).
Control methods for the automatic equalization of drawframe slivers are reviewed in chronological order. The structure and mechanism of different equalization systems are illustrated by diagrams. See also abstr. 3060/60. 36 refs. (4423)

AUTOMATION IN THE CARD ROOM. O-M Spinning Mach. Mfg. Co. Ltd. Textile Recorder 78: 64-65 (Aug. 1961).
The new O-M system is based on a method of coupling 6 or 8 cards up to a drawing head fitted with an auto-evening mechanism and automatic doffer. Two basic models of drawframe have been developed, OM-DCL and OM-FCL. The former controls the sliver evenness by varying the delivery speed while maintaining a uniform rate of feed into the machine, and through a card sliver conveyor to replace the card coilers. The second type controls evenness by varying the rate of sliver input while keeping the delivery speed constant. Technical details are covered. (4424)

FRANSBACH-FLYER. G. Porsche. Melliand 42, No. 3: 152 (1961).
The Fransbach flyer, compared with a normal flyer, can accommodate 40% more roving on a bobbin of the same size and shape without detrimentally affecting the Uster value of the sliver. Its construction is described. (4425)

ROVEMATIC HIGH-SPEED ROVING FRAME. Saco-Lowell Shops. Textile Bull. 87: 44-46, 71 (Aug. 1961).
The Rovematic produces a 14 x 7-inch package at flyer speeds up to 1,200 rpm. All mechanisms normally located under the roller beam have been moved into the head end. It is designed to virtually eliminate any ends-down in the area between the front roll and the flyer. When making one hank roving, it will doff in 3-1/4 hr, and it can consume some 36 bales of cotton per 120 hr. Its construction and operation are detailed. (4426)

Spinning, winding, twisting B4

WEIGHTING ARM WITH RELIEVING HANDLE AND STABILIZED CRADLE. Stahlecker GmbH and Württembergische Spindelfabrik GmbH. Melliand 42, No. 3: 154, 156 (1961).
The UT-Universal Weighting Arm is described and illustrated. It is a loading device for high drafting systems with central support of the rollers and can be used for ring frame drafting systems with two and three rollers as well as for drafting systems for flyers. (4427)

MODERN RING SPINNING. F. A. Greenwood (T. M. M. Research Ltd). Textile Weekly 61 (2): 204-208 (July 28, 1961); 261-262 (Aug. 4, 1961).
Factors in ring frame design and construction which allow for maximum production with minimum end-breaks are analyzed. (4428)

BILD-O-MATIC SPINNING BUILDER MOTION. So. Machy. Co. Textile Bull. 87: 41-43 (Aug. 1961); Am. Textile Reptr. 65: 35 (June 29, 1961).
The Bild-O-Matic is a builder motion that's totally enclosed and is designed to build a feeler bunch, the full bobbin, a tip bunch, lower the ring rail, and stop the spinning frame in doff position, all automatically. Its features, operation, and advantages are described. (4429)

NEW RANGE OF HIGH-SPEED WOOLEN RING FRAMES. Platt Bros. Ltd. Textile Recorder 78: 60-61, 67 (Aug. 1961).
The design and operation of the MWR3, 4, and 5 large package ring frames are described. (4430)

MACHINE UTILIZATION PLAN FOR A TWISTING MILL. M. Brüggemann. Textil-Praxis 16, No. 4: 369-371 (1961). In German. Through BCIRA 41: 2502 (1961).
The method described, involving the use of a detailed time table, makes it possible to plan the production and to predict the delivery date, assuming that sufficient manpower and machine capacity are available on receiving the order. (4431)

RUBBER MODELS OF YARNS AND CORDS: DOUBLING OF SINGLE RODS. N. Wilson and L. R. G. Treloar. Brit. J. Appl. Phys. 12, No. 4: 147-154 (1961). Through BCIRA 41: 2591 (1961).
The paper is concerned with the calculation and measurement of the stresses involved in the twisting together of two cylindrical rubber rods, which may be taken as a model of a two-ply cord. Two cases were examined: in the first the rods are initially without twist, while in the second they contain initial twist. For the case of zero initial twist in the rods the agreement between calculated and observed forces is good. When initial twist is present, however, there are significant differences which are not fully understood. (4432)

TWIST AND TENSION AS FACTORS IN YARN CHARACTERISTICS. K. Sreenivasan and K. S. Shankaranarayana (South India Textile Research Assoc.). Textile Research J. 31: 746-753 (Aug. 1961).
Twist and tension during spinning play an important part in deciding the yarn characteristics. The dual effect of twist and tension on yarn characteristics--their effect after the yarn leaves the front roller nip and before it is wound on the cop--has not received as much attention as it deserves. This effect has been studied here by varying the twist multiplier from 0.65 to 9 on roving and 3.5 to 7 on 32s yarn at different tensions. 4 refs. (4433)

Yarns B5

GRAPHICAL EVALUATION OF THE HYSTERESIS LOOP. EXAMINATION OF THE STARTING PROCESSES. G. Kemmnitz. Faserforsch. u. Textiltech. 12, No. 3: 113-118; No. 4: 149-156 (1961). In German. Through BCIRA 41: 2387 (1961).
The deformation processes in viscose and polyamide cords were studied at constant deformation within two constant stress stages. The length changes and stress curve are expressed by a formula. Various approximation equations are given for the calculation of the area of the hysteresis loop and a graphical method is described, by means of which it is possible to determine also for nonperiodical processes the phase difference between stress and length changes. (4434)

ASSEMBLY PUTS BULK BACK IN PACKAGE-DYED ORLON. H. T. Pratt (E. I. du Pont de Nemours & Co.). Textile World 111: 52-53 (Aug. 1961).
A knife edge unit for stress-bulking package dyed yarn to restore their soft hand and round cross-section is described. (4435)

SPUN COLORED NYLON YARNS FOR WARP KNITTED SHIRTINGS. Brit. Nylon Spinners Ltd, Textile Development Dept. July 1961. 4 p. Advance report No. 41.
This report describes yarn properties and fastness characteristics, and also suggests some techniques for knitting and finishing these yarns. (4436)

MANMADE FIBER MARINE ROPES. Modern Textiles Mag. 42: 38, 48 (Aug. 1961).
The reasons for the replacement of abaca fiber ropes with those made from manmade fibers are briefly noted. (4437)

STRESS-STRAIN RELATIONSHIPS IN YARNS SUBJECTED TO RAPID IMPACT LOADING. PART 7. STRESS-STRAIN CURVES AND BREAKING-ENERGY DATA FOR TEXTILE YARNS. J. C. Smith, P. J. Shouse, J. M. Blandford, and K. M. Towne (Nat. Bur. Standards). Textile Research J. 31: 721-734 (Aug. 1961).
Stress-strain curves at rates of straining up to 440,000%/min have been obtained for a number of textile yarns by a technique involving high-speed photography of the yarn following transverse impact. These curves and others obtained at conventional speeds are presented for samples of acetate, triacetate, cotton, polyester, glass fiber, human hair, vinal, nylon, acrylic, rayon, saran, and silk yarns. Also given are specific breaking energies obtained from the areas under the stress-strain curves and by direct measurements involving longitudinal impact speeds of the order of 50 m/sec. These data show how stress-strain curves depend upon rate of straining and provide ratings for the yarns with respect to ability to survive impact and to resist impact without appreciable deformation. See abstr. 4815/60 for previous part. 10 refs. (4438)

DYNAMIC AND STATIC FATIGUE TESTS ON CORD RAYON. W. Wegener. Textil-Praxis 16, No. 4: 586-594 (1961). In German. Through BCIRA 41: 2593 (1961).
This is a continuation of a previous paper on the effect of protective twist on the dynamometric properties of tire cord (abstr. 936/61). Neither the static nor the dynamic fatigue tests showed an appreciable difference between testing materials with and without protective twist. (4439)

HARD TWISTED YARN. PART 5. INFLUENCES OF TWISTING TENSION AND MECHANICAL PROPERTIES OF ORIGINAL FILAMENT UPON THE STRUCTURE OF TWISTED YARN. S. Kakiage. J. Textile Machy. Soc. Japan 14, No. 5: 314-318 (1961). In Japanese (English summary). Through BCIRA 41: 2385 (1961).
Yarns twisted from nylon and cuprammonium-rayon filaments (higher Young's modulus) were studied. The larger the twisting tension the less the fiber migration. For nylon, the bending of the filaments is a maximum at a twisting tension of 0.2 g/denier. For cuprammonium rayon, the neutral zone is clearly visible by observing the buckling of the filaments; finishing oils clarify it and reduce fiber migration. (4440)

SOME ASPECTS OF THE MANUFACTURE OF SEWING THREADS. L. Cooke. Hosiery Times 34: 21-28, 81-89 (May 1961). (4441)

EPOXY-GLASS CORD FOR ELECTRICAL LASHING. Minn. Mining & Mfg. Co. Daily News Record No. 164: 25 (Aug. 24, 1961).
Construction and uses of Scotchply XP-205 are noted. (4442)

CAUSES OF THICKENED SECTIONS IN COTTON YARNS. O. Radke. Textil-Praxis (English ed.) No. 2: 53-54 (June 1961).
Sources and prevention of nonuniformly and uniformly shaped thickened sections are briefly discussed. (4443)

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

ACTION OF ACRYLIC AND METACRYLIC ACID POLYMERS ON SYNTHETIC FIBERS. I. Ronzoni, D. Grazioli, and C. Donati. Notiziario Tec. Tess. 10, No. 2: 55-61 (1960). In Italian. Through BCIRA 41: 1874 (1961).
A detailed description is given of a series of experiments to ascertain the nature of the interaction between polyamide fiber and acrylic and metacrylic acids, and to determine the conditions of such interaction. This interaction has an important bearing on the use of such acids in sizing and finishing. (4444)

SIZING MACHINES FOR COTTON AND VISCOSE RAYON STAPLE FIBER WARPS. W. Franke. Melliand 42, No. 3: 162-166 (1961).
A 5-cylinder installation and a modern frictionless beaming machine of Gebr. Sucker GmbH are described. The technique of contact drying of the sized warps on steam-heated cylinders permits sizing rates of 120 m/min. (4445)

USE THIS CONTROL CHART TO CHECK WARPER BREAKS. N. L. Enrick. Modern Textiles Mag. 42: 47-48 (Aug. 1961).
The construction of a chart to serve as a daily check on permissible limits of warper breaks is described. (4446)

ECONOMIC YARN REELING. Melliand 42, No. 3: 160-162 (1961).
The reasons for yarn reeling, the qualities required in the hank formed, and cost reduction by the use of heavy hanks are briefly discussed. (4447)

AUTOMATIC CONTROL OF IMPREGNATING AND COATING PROCESSES. E. H. Jones. Control 4: 84-88 (June 1961). Through BCIRA 41: 2516 (1961).
The basic principles of systems developed for warp sizing are described, and applications in cloth finishing, plasticizing of viscose sheet, bonding of glass fiber, back sizing of carpets, and coating of paper are discussed. (4448)

YARN BRAKE. PART 3. ADVANTAGES AND DISADVANTAGES OF KNOWN YARN BRAKE TYPES. E. Beschnitt. Deut. Textiltech. 11, No. 3: 130-133 (1961). In German. Through BCIRA 41: 2513 (1961).
This article supplements the previous parts (abstr. 1947/61) by the detailed description of the three most popular brake types: disc brake, claw brake, and compensating roller. (4449)

Weaving C2

HIGH SPEED PICK-AND-PICK GUNNE LOOM. M. Michelitsch. Melliand 42, No. 3: 166-172 (1961).
The construction and drive of the loom, mechanisms for the warp-thread movement, and picking mechanisms are described and illustrated. (4450)

SAFETY DEVICES ON MODERN AUTOMATIC LOOMS. C. Weise. Deut. Textiltech. 11, No. 3: 134-138 (1961). In German. Through BCIRA 41: 2521 (1961).
The protective devices provided on the newly-developed automatic cotton loom, model 4200 (VEB Webstuhlbau Neugersdorf), are described, and the necessity of fitting such devices on weaving machinery is pointed out. (4451)

DETERMINATION OF THE OPTIMUM DIMENSIONS OF THE LAY GEAR ON BUCKSKIN LOOMS, WITH REFERENCE TO THE GEAR FOR THE PICK AND CHANGE. H. Neumann and V. Sebastian. Deut. Textiltech. 11, No. 4: 199-203 (1961). In German. Through BCIRA 41: 2520 (1961).
The relationships between the gears for the lay movement, shuttle movement, and shuttle change are elucidated, and an attempt is made to determine the optimum value for the crank-coupling ratio in the lay gear. This ratio exerts opposite effects on the shuttle movement on the one hand, and on the lay and box movement, on the other. (4452)

SAURER TERRY TOWEL MULTICOLOR AUTOMATIC LOOM. Textile Weekly 61 (2): 263-264 (Aug. 4, 1961).
The centralized control mechanism of the loom is actuated by a roller chain from the tappet or dobby driving shaft; by this means changes in the type of cloth (3 or 4 picked) can be easily achieved. As, in addition, several other functions are controlled from a camshaft, operational difficulties have been reduced to a minimum. Fringe forming attachments can be fitted if required. (4453)

LOOMFIXER AND HIS JOB. PART 31. W. Westbrook. Textile Bull. 87: 47-48 (Aug. 1961).
Pointers on systematic inspections for locating trouble spots. (4454)

TROUBLES IN PICKING. A. Jäger. Textil-Praxis (English ed.) No. 2: 63 (June 1961).
Pointers on shed setting, reed alignment, and reed insertion to eliminate faulty picking. (4455)

WEAVING OF SMALL WIDTHS ON LARGE LOOMS. J. Duval. Industrie Textile: 131-135 (Feb. 1961). In French. Through BCIRA 41: 2522 (1961).
The method described (used in Japan for weaving ribbons, etc.) consists in weaving on an ordinary loom a wide fabric in which a thermoplastic manmade fiber yarn is used as weft and metallic threads are arranged parallel to and between groups of the warp threads. The wide fabric is then divided into ribbons by electrically heating the interlaced metallic threads, and cutting it at the contact points with the latter. The heated threads fuse the thermoplastic fibers together and a neat and stiff selvage is formed. (4456)

DEVICE FOR MEASURING THE PICKING FORCE ON THE LOOM WITH CONTINUOUS REGISTRATION. H. Perner and H. Zschunke. Deut. Textiltech. 11, No. 4: 195-198 (1961). In German. Through BCIRA 41: 2519 (1961).
It is shown that continuous measurements of the picking force and shuttle braking can be effected on a loom by means of a relatively simple apparatus suitable only for measurements in the plant. Results obtained on the automatic TES 4200 loom model are presented. (4457)

JACQUARD WEAVING. D. De Jonghe, V. Galens, and M. Tavernier. Rev. Textilis 17, No. 3: 49-51; No. 4: 29-33 (1961). In Dutch. Through BCIRA 41: 2517 (1961). (4458)

LENO WEAVING. Grob & Co. Ltd. Textile Weekly 61 (2): 215-216 (July 28, 1961).
This report considers further methods of tension equalization using easer bars under spring tension, falling rollers and compensation heddles used in jacquard weaving. See abstrs. 3504/60 and 967/61 for previous articles on equalizer bars, equalizer frames, and easer motions. (4459)

Knitting C3

FUNDAMENTALS OF WARP KNIT ENGINEERING. PART 12. A. Reisfeld (Gehring Textiles, Inc.). Knitted Outerwear Times 30: 19-23, 49-50 (Aug. 14, 1961).
Preliminary to a discussion of the use of staple fiber yarns in warp knitting, the spinning and cone winding of staple fiber yarns are described. Reference is also made to the warp knitting of special forms of staple fiber, e.g. batting, wadding, lap, sliver, and roving. 17 refs. (4460)

PROPERTIES OF KNITTING YARN OILS. J. Thornton (Benjamin R. Vickers Ltd). Hosiery Times 34: 38 (July 1961).
The requirements of the lubricants, the properties they confer, and the types used are briefly discussed. (4461)

RIB JACQUARD CONSTRUCTIONS. R. W. Mills. Hosiery Times 34: 43, 45 (July 1961).
The production of 2, 3, and 4 color effects in rib fabrics is described. (4462)

GEOMETRY OF TEXTURED YARN FABRICS. S. Fitton and J. C. Hopkinson. Hosiery Times 34: 57-61 (July 1961).
Observations on the fabric geometry of plain, interlock, full-cardigan, and half-cardigan structures knitted from various crimped continuous filament yarns. (4463)

RINGING THE CHANGES IN WEB EYELET FABRICS. H. York (Kroy Knitting Developments). Hosiery Trade J. 68: 108-109 (Aug. 1961).
The knitting sequences for the production of standard, diagonal, patterned, close, fine, and pinpoint eyelet fabrics are outlined. (4464)

NEWEST WAY TO ANALYZE TRICOT. C. A. Hayes and T. H. Johnson. Textile World 111: 51 (Aug. 1961).
Table for determining rack weight and piece weight of tricot fabrics. (4465)

RASCHEL FABRICS FOR OUTERWEAR. J. B. Lancashire. Hosiery Trade J. 68: 122-124, 127 (Aug. 1961). (4466)

EUROPEAN KNITTING DIARY. R. Innes. Hosiery Trade J. 68: 96-97, 117 (Aug. 1961).
Among the developments described are: FM circular rib stitch transfer machine; improvements in stop motions for flat bar and straight bar knitting machines; and manufacture of glove lengths in a continuous string. (4467)

LEBOCEY NOPAVITAR JACQUARD DOUBLE JERSEY MACHINE. G. Lebocey & Cie. Hosiery Trade J. 68: 110-111 (Aug. 1961).
The Nopavitar, a development of the Nopavit machine, retains the general features and patterning possibilities of the latter. In addition, it has 2-color striping attachments to allow the production of larger area plaid and check patterns, including Prince of Wales check and others based on a combination of jacquard and stripes. Other features are noted. (4468)

MULTIPLEX MODEL 5606/2 CIRCULAR INTERLOCK MACHINE. Rund & Flachstrickmaschinenbau. Skinner's Silk & Rayon Record 35: 755-756 (Aug. 1961).
Compared with former models, the new high-capacity, multisystem Multiplex 5606/2 gives about 80% higher production and greater variety of patterns due to a new cam construction. Cams are arranged so that any four systems form a group of cams. Features and operation are described. (4469)

TECHNICAL FEATURES OF MAYER OVERNIT II MACHINE. J. B. Lancashire (Leicester Coll. Technol.). Knitted Outerwear Times 30: 5-11, 28 (Aug. 21, 1961).
The Mayer Overnit II machine is a cylinder-and-dial model especially suitable for the production of flat jacquard and jacquard relief textures, but can also make non-jacquard double jersey fabrics such as interlock, eightlock, single and double pique and bourrelet, as well as various tuck rib structures and lace-like tuck jacquard effects. Features and design possibilities are described in detail. (4470)

DEVELOPMENTS IN AUTOMATIC FULL-FASHIONED OUTERWEAR MACHINES. E. Start (William Cotton Ltd). Hosiery Times 34: 31-32 (May 1961). (4471)

PRACTICAL HINTS FOR KNITTERS. PART 10. DOUBLE CYLINDER HALF-HOSE AND SOCK MACHINES. Hosiery Trade J. 68: 112-113 (Aug. 1961).
Maintenance problems concerned with cylinder alignment, dividing cam adjustment, needle transfer action, and textured yarn knitting are summarized. (4472)

KNITTING NEEDLES SURVEY. J. B. Lancashire and E. A. Keates. Hosiery Trade J. 68: 98-100 (Aug. 1961).
Various types of needles and their knitting possibilities are reviewed. (4473)

FOCUS ON SEAM-FREE STOCKINGS. J. B. Lancashire. Textile Recorder 78: 50-51 (Aug. 1961).
Latest techniques and machinery in the field of seam-free hose manufacture are reviewed. (4474)

Fabrics C4

INFLUENCE OF CHANGES IN MOISTURE CONTENT ON THE WRINKLE RECOVERY OF FABRICS. PART 1. A. J. Farnworth and J. Lindberg (Swed. Inst. Textile Research). Textile Research J. 31: 687-694 (Aug. 1961).
A study has been made of the effect of rate of drying, and of alternate wetting and drying, on the wrinkle recovery of fabrics of wool, wool blends, and cotton, when wrinkled in the wet state. Recovery is independent of the rate of drying, but a second-stage rapid recovery occurs at a stage in drying corresponding to loss of water from the internal fiber structure, as distinct from surface evaporation. Repeated, alternate increase and decrease of regain leads to progressive, step-wise recovery from wet wrinkling. It is probable that the energy required to give these effects originates from the swelling-deswelling associated with changes in regain. 7 refs. (4475)

INFLUENCE OF CHANGES IN MOISTURE CONTENT ON THE WRINKLE RECOVERY OF FABRICS. PART 2. J. Lindberg (Swed. Inst. Textile Research). Textile Research J. 31: 695-696 (Aug. 1961).
Using a rheological model for describing qualitatively fabric recovery from deformation, it is established that the theory of frictional restraint is compatible with the progressive crease recovery on alternate drying and wetting (see abstr. 4475/61), and in fact gives a far better explanation than the theory of permanent fiber deformation. 4 refs. (4476)

THEORY OF SHRINKPROOFING OF WOOL. PART 3. METHOD FOR DETERMINATION OF THE FORCE ON A FIBER DURING FELTING. J. H. Bradbury and H. Groll (CSIRO Wool Research Labs.). Textile Research J. 31: 743-745 (Aug. 1961). (4477)

MERAKLON POLYPROPYLENE CARPET FIBER. Montecatini Soc. Gen. Mineraria Chimica. Daily News Record No. 163: 32 (Aug. 23, 1961). (4478)

CARE OF CARPET TUFTING MACHINE LOOPERS. Man-Made Textiles 37: 53 (Aug. 1961).
Seven loopers in various states of wear are illustrated and discussed. (4479)

UTILIZATION VALUE OF WOOL AND OTHER FIBERS IN FURNISHING FABRICS AND CARPETS. Spinner u. Weber 79, No. 4: 327-330 (1961). In German. Through BCIRA 41: 2601 (1961).
Factors responsible for the wear value of furnishing fabrics and carpets are reviewed. The main complaints of the consumers concern the increased sensitivity to pressure and premature rapid wear and tear, formation of dirty streaks, and color changes and streak formation. (4480)

BACKING A CARPET WITH A FOAM UNDERLAY. E. J. P. Reynolds (Rubber Latex Ltd). Skinner's Silk & Rayon Record 35: 785, 788 (Aug. 1961).
The method consists of making the foam by mixing into a latex compound a controlled amount of air, and, at a certain stage in the mixing process adding auxiliary chemicals to gel the foam. It is then spread onto the carpet and subjected to heat, which serves to gel, vulcanize, and dry the foam in situ. Details of the process are included. (4481)

CHEMISTRY AND CLOTHING. J. W. Bell and C. S. Whewell. Advanc. Sci. 17: 26-32 (May 1960). Through BCIRA 41: 2396 (1961).
This paper, which deals with the properties of synthetic fibers, textile materials as heat insulators, and the chemical finishing of fabrics, is based on four papers presented at the 1959 Meeting of the British Association for the Advancement of Science. (4482)

AIR-VENTILATED SUIT FOR WEAR IN VERY HOT ENVIRONMENTS. G. W. Crockford, R. F. Hellon, P. W. Humphreys, and A. R. Lind. Ergonomics 4, No. 1: 63-72 (1961). Through BCIRA 41: 2605 (1961).
The effectiveness of an air-ventilated clothing assembly has been tested on men exposed to an ambient temperature of about 81° C. (4483)

ELASTIC WEAVE FABRICS. H. Walter. Textil-Praxis (English ed.) No. 2: 58 (June 1961).
The production of elastic weaves by a combination of warp and weft ribs in which the warp and weft threads change positions by group is described and illustrated. (4484)

GABARDINE PRODUCTION AND FINISHING. H. Vonberg. Textil-Praxis (English ed.) No. 2: 59-60 (June 1961).
The construction of true, false, and reform gabardines and the finishing of piece-dyed worsted gabardine is described. (4485)

PREVENTION OF INJURIES, WHICH MAY RESULT BY FALLS FROM GREAT HEIGHT WHEN USING SYNTHETIC FIBER SAFETY BELTS. F. Mercx. Ann. Sci. Textiles Belges No. 4: 92-102 (1960). In French. Through BCIRA 41: 2595 (1961).
A formula is given for calculating the strength of safety belts, experiments are described, and practical and theoretical data are compared. It is concluded that a cord diameter of 12 mm is sufficient to ensure the necessary breaking strength and to maintain the dynamic pressure below 1,500 kg. Safety-belt cords from man-made fibers should be discarded when they attain a permanent elongation of 30% of the initial length, measured between the splicing points. (4486)

ADHESIVES FOR FOAM LAMINATES. Daily News Record No. 156: 18 (Aug. 11, 1961).
Properties of Rhoplex acrylic base adhesives (Rohm & Haas Co.) and Maniflex 798 (Manufacturers Chem. Co.) are noted. (4487)

MICROSCOPIC METHODS IN PRACTICAL INVESTIGATIONS AND RESEARCH. G. Hummel. Textil-Praxis 16, No. 4: 398-402 (1961). In German. Through BCIRA 41: 2599 (1961).
It is shown how the common defect of milky stripes in viscose rayon can be elucidated by microscopic methods. Photomicrographs are given and a bibliography is cited. (4488)

FOAM LAMINATES. R. W. Pinault. Textile World 111: 44-50 (Aug. 1961).
Up-to-the-minute information on foams: how they're made; how to apply them; and present status and future outlook. (4489)

POLYURETHANE FOAM IN CLOTHING. PART 3. L. Weinstock. Man-Made Textiles 37: 50-51 (Aug. 1961).
Some of the more interesting aspects of urethane foam, its expanding use in the clothing and related fields, and its future in the textile industry. (4490)

ULTRA-VIOLET STABILIZERS FOR REINFORCED LAMINATES. C. Musgrave (Geigy Co. Ltd). Fibres and Plastics 22: 241-242 (Aug. 1961).
The types of stabilizers available, their characteristics, and the effectiveness of benzotriazoles for polyester glass fiber laminates are described. (4491)

WEAVING FAULTS IN TERRY FABRICS AND THEIR ELIMINATION. A. Meister and M. Ziegler. Melliand 42, No. 3: 172-176 (1961).
Reed stripes, burls, bare places, faulty loops, and faults due to the takeup roller are covered. (4492)

EFFECT OF YARN COUNT, TWIST, AND FIBER QUALITY ON THE APPEARANCE OF WOOL FABRICS. PART 1. D. L. Eastwood and P. P. Townend. Textile Recorder 78: 47-49 (Aug. 1961).
Literature dealing with shade variations in yarns and fabric streakiness is reviewed, and new work carried out to determine the effect of various yarn properties on the appearance of fabrics is described. (4493)

CAUSES OF FAULTS, STAINS, AND DEFECTS FOUND IN DYEING, PRINTING, AND FINISHING. THEIR DETECTION: PRACTICAL MEANS OF AVOIDING AND CORRECTING THEM. P. Colomb. Teintex 26, No. 4: 257-265 (1961). In French. Through BCIRA 41: 2602 (1961).
Stains originating from weaving and handling, and preventive (stain-repelling) treatments of the finished fabrics are discussed. For previous part see abstr. 1947/60. (4494)

HOW TO DESIGN AND LAY OUT MULTIPLE FABRICS. PART 2. E. B. Berry. Textile Bull. 87: 58-63 (Aug. 1961).
Steps in design layout and stitching (raiser, sinker, and extra end) to form a simple double cloth are described. (4495)

DESIGN IN WOVEN STRUCTURE: IMITATION BACKED CLOTHS (continued). D. C. Snowden. Wool Rev. 35: 27 (July 1961). (4496)

RADIATION RESISTANT NONWOVEN FABRIC. United Coke & Chem. Co. Ltd. Daily News Record No. 163: 4 (Aug. 23, 1961).
The radiation resistance and dimensional stability to water of Orkot TL resin bonded fabric are illustrated and other mechanical properties noted. (4497)

UNIVERSAL SHEET MACHINE VS3. Ernst Fehrer Spezialmaschinenfabrik. Melliand 42, No. 3: 176 (1961).
Features of a machine for the production of uniform, endless, nonwoven sheets from hair or hard fibers are briefly noted. (4498)

LARGE FABRIC COLLECTIONS BASED ON A FEW GRADES OF YARN. P. Eller. Textil-Praxis (English ed.) No. 2: 62-63 (June 1961).
The possibilities of producing a variety of fabrics based on a single yarn by variations in finishing, weaving, and dyeing are illustrated by means of an example based on a wool yarn. (4499)

ECONOMY AND FUTURE PROSPECTS OF THE MALIMO TECHNIQUE. H. Mauersberger. Textil-Praxis 16, No. 4: 375-379 (1961). In German. Through BCIRA 41: 2523 (1961).
The structure and properties of Malimo fabrics are discussed. The better absorbability (in towels) and the relatively low price of the finished product, together with the high productivity of the machine, should promote and ensure the sale of the fabric. Other economic and technological advantages are enumerated. (4500)

TEXTILES FROM PULP? P. Abbenheim. Man-Made Textiles 37: 32-35 (Aug. 1961).
The production of nonwovens by papermaking techniques as exemplified by the development of textryls (E.I. du Pont de Nemours & Co.) and of wet-laid materials from RD-10 rayon fibers (Am. Viscose Corp.) are described as well as the properties of the resultant products and their potential applications. (4501)

TEXTRYLS AND FIBRIDS. PART 3. TEXTRYL PROPERTIES CAN BE TAILORMADE. Fibres and Plastics 22: 223-225 (Aug. 1961).
The physical properties of textryls can be tailored to meet specific needs by varying the composition of the textryl and by the fusing or calendering conditions used in manufacturing the textryl. Some effects of these variables upon selected physical properties of textryls are discussed. (4502)

MANUFACTURE OF PILE FABRIC AND VELVET. P. Pinchetti. Notiziario Tec. Tess. 10, No. 3: 55-59 (1960). In Italian. Through BCIRA 41: 1887 (1961).
For previous part see abstr. 4377/60. (4503)

STRUCTURAL ASPECTS OF BONDING. PART 1. J. A. Van den Akker (Inst. Paper Chemistry). Fibres and Plastics 22: 236-240 (Aug. 1961).
In this article the emphasis is on the probable physical nature of the fiber-fiber bond in paper. The architectur of fiber-fiber bonds is discussed together with the stresses and strains present in bonds, with suggestions on how the fibrils can lead to mechanical anisotrophy. (4504)

DEVELOPMENTS IN PLASTICS FOR SOLAR ENERGY APPLICATIONS. F. E. Edlin and D. E. Willauer (E. I. du Pont de Nemours & Co.). Daily News Record No. 169: 24 (Aug. 30, 1961). (4505)

JAPANESE SILK TREATMENT TO STOP YELLOWING. Japan Ministry Agri. & Forestry. Daily News Record No. 152: 6 (Aug. 7, 1961).
Fabrics are immersed in a heavy metal salt solution and fixed with acid to resist yellowing due to UV rays. (4506)

FINISHING

FINISHING PIECE-DYED ESKIMO CLOTH. H. Vonberg. Textil-Praxis (English ed.) No. 2: 74 (June 1961). (4507)

USE OF ACOUSTIC AND ULTRASONIC VIBRATIONS IN PROCEDURES OF CHEMICAL TECHNOLOGY. C. Weimann. Teintex 26, No. 3: 190-201; No. 4: 265-277 (1961). In French. Through BCIRA 41: 2537 (1961).
Research carried out by Soviet scientists on the use of acoustic and ultrasonic vibrations in the textile and dyeing industries (washing of wool, continuous dyeing), as well as in the chemical industry (preparation of finishes, dispersion of certain pigment dyes) is reviewed, with special reference to articles in which a detailed study is made of emitters used at present in the industry. (4508)

FINISHING TUBULAR FABRICS KNITTED OF CRESLAN FIBER YARNS. B. Sternlieb (Am. Cyanamid Co.). Knitted Outerwear Times 30: 25-29 (Aug. 28, 1961).
General recommendations applicable to both yarn-dyed and piece dyed fabrics are set forth. (4509)

MECHANICAL FINISHING OF FABRICS. J. J. McDonald (Lowell Technological Inst.). Am. Dyestuff Reptr. 50: P595-P597 (Aug. 7, 1961).
The relationship of padding, drying, and curing to chemical finishing and their importance in achieving a uniform and acceptable end product are briefly discussed. (4510)

DYEING AND FINISHING OF KNITTED GOODS. E. R. Trotman. Dyer 126: 93-94 (July 28, 1961).
The full text will be published in The Cobbler. (4511)

PIECE DYEING AND FINISHING KNITWEAR OF ORLON SAYELLE. C. Keresztes (E. I. du Pont de Nemours & Co.). Knitted Outerwear Times 30: 21, 35 (Aug. 28, 1961). (4512)

DYEING AND FINISHING OF PERLON CORSET CLOTH. H. Dunkel. Textil-Praxis (English ed.) No. 2: 80-81 (June 1961). (4513)

DOCTOR BLADE. Tinctoria 43, No. 3: 109-111 (1961). In Italian. Through BCIRA 41: 2545 (1961).
Various uses of this simple device are reviewed (e.g. resin-finishing, coating of linoleum, bonding of fabrics, printing) and an attempt is made to find a mathematical formula expressing the physical processes taking place during coating of fabrics. (4514)

Chemical processes D1

CHEMICAL FINISHING OF CELLULOSE. D. D. Gagliardi (Gagliardi Research Corp.). Am. Dyestuff Reptr. 50: P592-P595 (Aug. 7, 1961).
The principle of modifying fiber properties by cross-linking reactions, the types of compounds used, and the future potentials of such reactions are summarized. (4515)

EFFECTS OF PHOSPHATES AND SILICATES ON SILK. PART 6. EFFECTS OF CONDENSED PHOSPHATES ON SILK IN TIN WEIGHTING. E. Omura, A. Hirata, and M. Koyayashi. J. Soc. Textile Cellulose Inds. Japan 17, No. 4: 351-353 (1961). In Japanese (English summary). Through BCIRA 41: 2355 (1961).
Treatments in conjunction with stannic chloride (degummed raw silk and Habutae fabrics) showed that the weight percentage increases with number of treatments, and the potassium salts are less influenced by temperature and concentration than the sodium salts. (4516)

CHEMICAL FINISHING OF WOOL AND BLENDED FABRICS. W. von Bergen (J. P. Stevens & Co.). Am. Dyestuff Reptr. 50: P597-P599 (Aug. 7, 1961).
Brief survey of developments in finishes for wash and wear, mothproofing, waterproofing, oil repellency, and shrinkproofing. 4 refs. (4517)

BAYMAL COLLOIDAL ALUMINA. J. Bugosh (E. I. du Pont de Nemours & Co.). Am. Textile Reptr. 75: 65 (Aug. 17, 1961).
Films of Baymal colloidal alumina when applied to synthetic fibers impart antistatic, soil and stain retardant, and pill retardant effects to the surface. In addition, films of Baymal frictionize textile fibers slightly and prevent the permanent stretch of knit acrylics. The properties to which it owes its wide spectrum of potential applications are described. (4518)

GET ACQUAINTED WITH THE CAROB. D. Singh. Indian Fmg 11, No. 2: 12, 40 (1961). Through BCIRA 41: 2515 (1961).
The cultivation of the carob tree (Ceratonia silequa L.) in India is discussed; the use of the gum from the seeds in sizing, printing, and finishing is referred to, and it is also stated that the wood is a good source of a natural dye called Algarrobin and as a mordant for coal-tar colors. (4519)

CONSTITUTION AND PROPERTIES OF SURFACE ACTIVE SUBSTANCES. PART 3. EFFECT OF STRUCTURAL ELEMENTS ON PHYSICAL PHENOMENA AND APPLICABILITY. H. Kölbel, D. Klamann, and P. Kurzendörfer. Angew. Chemie 73, No. 9: 290-298 (1961). In German. Through BCIRA 41: 2402 (1961).
The surface active properties (surface-film formation and wetting, foaming and washing power) and the micelle formation of alkyl sulfates and alkane sulfonates, as well as of benzene mono- and dialkyl sulfonates, are examined. Relationships between constitution and properties of pure detergents were established by varying the structure of the compounds (nature of the hydrophobic molecule, presence of a linkage between the hydrophobic alkyl chain and the hydrophilic group, type and position of the hydrophilic group). For Part 2, see abstr. 3973/60. (4520)

LITHIUM HYPOCHLORITE AS A BLEACH. Dyer 126: 170 (Aug. 11, 1961).
Lithium hypochlorite is a solid with bleaching properties the equal of sodium hypochlorite, and with a very high chlorine effectiveness. It causes no greater decrease in strength than sodium hypochlorite, and is very rapidly soluble in water which avoids the danger of local high concentrations of bleaching agent. No calcium is present and so there is no formation of scummy precipitates with soaps. (4521)

PRETREATMENT INSTALLATION FOR DESIZING, SCOURING, AND BLEACHING. R. B. Vogel and W. Neumann. Textil-Praxis (English ed.) No. 2: 70-71 (June 1961).
A pretreatment installation (Maschinenfabrik Gerber, Krefeld) is described. The main component is a pretreatment jig (impregnating machine) whose essential feature consists in the potential use of the thermobatching (Thermo-verweil) process, permitting the removal of the takeup rollers with the rolled-up cloth without rewinding and the placing of them in the so-called batching chambers. This is of particular advantage when small batches are treated. (4522)

THREE IDEAS FOR SHORTENING WOOL BLEACHING CYCLE. B. K. Easton. Modern Textiles Mag. 42: 24 (Aug. 1961).
The three proposals discussed are: the addition of a brief steaming step to the conventional dry-in bleach system; the adaptation of the cold bleach method; the development of a short-time bleaching process for wool (similar to that used on cotton) by elevating the temperature as rapidly as possible for a relatively short period. (4523)

BLEACH PROCESS FOR COTTON KNITS. Can. Inds. Ltd. Daily News Record No. 153: 21 (Aug. 8, 1961).
The process employs a semicontinuous operation with additions of sodium hypochlorite, caustic soda, and hydrogen peroxide. (4524)

TEXTILE COATINGS WITH POLYURETHANES. O. Glenz and F. Kassack. Melliand 42, No. 3: 182-188 (1961).
The chemical principles, on which the properties of polyurethane coatings are based, are discussed and preparation and application of the pastes, as well as general problems concerning the required machinery and the potential uses of polyurethane-coated textiles are described. (4525)

SURFACE COATING AND IMPREGNATING FABRICS. PART 2. MODERN COATING MACHINE DESIGN. Fibres and Plastics 22: 232-235 (Aug. 1961).
In the second part of this survey of fabric coating equipment, drying techniques, design considerations, coating speeds, and a plant for vinyl coating are among the topics discussed. (4526)

FACTORS AFFECTING TEAR STRENGTH OF COATED FABRICS. F. K. Burr (Fabric Research Labs.). Am. Textile Reptr. 75: 71-72 (Aug. 17, 1961).
Since the principal factors affecting tear strength of an uncoated fabric are: yarn tensile strength which affects the load bearing ability up to the point of rupture for the single yarn and the number of yarns in the tear area that support the load, consideration in coating must be given not only to the mobility of yarns in the fabric and their ability to shift under stress, but also the elastic properties which derive from either the inherent nature of the fibers of the yarn or from twist considerations, and crimp. The necessity for engineering coating formulas and techniques to avoid brittle films and too deep penetration of coating materials, both of which limit yarn mobility, is stressed. Methods of altering fabric geometry to increase tensile strength are also discussed. (4527)

FABRIC AND PLASTIC COATING BY METAL VAPORIZATION. H. Heiner. Elektrotech. u. Maschinenbau 75: 429-430 (1958). Summary in Chem. Abstr. 55: 12862c (1961). (4528)

COATING FABRICS WITH METALS. Thermo-Chem. Corp. Daily News Record No. 165: 18 (Aug. 25, 1961).
Applications and potentials of a new process are cited. (4529)

MODERN FINISHING MACHINES. PART 1. W. T. Swatek. Melliand Textilber. 42, No. 3: 337-341 (1961). In German. Through BCIRA 41: 2552 (1961).
The wet decatizing machine of Drabert-Kettling & Braun for the treatment of wool and mixed fabrics is described, and its mechanism explained. (4530)

SILK YARN COATING PROCESS. Scalamandre Silks, Inc. Daily News Record No. 149: 23 (Aug. 2, 1961).
The coating of silk yarns in skein form with liquid paraffin facilitates weaving, removal of dirt and foreign particles from fabrics, and imparts water and stain resistant qualities to the finished fabrics. (4531)

VARIATION OF DEGUMMING RESISTANCE OF SERICIN CAUSED BY HEAT AND METALLIC SALT. H. Takagi. J. Fac. Textile Seric. Shinshu Univ. No. 24 (Ser. B, Textile Engineering No. 4). 16 p. 1960. In English. Through BCIRA 41: 2332 (1961).
The presence of air in the steam used in the cocoon-boiling method increases the resistance of the raw silk to degumming; so also does the presence of certain salts (e.g. $Cr_2(SO_4)_3$, $Al_2(SO_4)_3$, $CuSO_4$). (4532)

COIN-OP DRYCLEANING. Consumer Bull. 44: 14-15 (Aug. 1961).
In this preliminary report the Norge drycleaning system investigated was found satisfactory in almost every respect. The system is recommended for all clothing except clothing of animal fur. (4533)

PROBLEMS IN WET FINISHING WOOLEN AND WORSTED FABRICS. H. L. Hallas. Textile Recorder 78: 52-53 (Aug. 1961).
The author discusses crimps, bleeding, and staining during fulling, and the fulling of crushed finish worsted fabrics. (4534)

SAFE LAUNDERING PRACTICES FOR DECORATIVE FIBER GLASS DRAPES. C. Simon. Am. Textile Reptr. 75: 97-98, 108 (Aug. 17, 1961).
Guide for washing fiber glass fabrics commercially with available equipment or by using the new tank method. (4535)

REMOVING TOUGH STAINS CAN BE MADE EASY. J. Balog (Cowles Chem. Co.). Institutional Laundry 5: 10-12 (May 1961).
Laundering procedures for removing blood and albumin stains, mildew stains, and ground-in soil and grease from linens in commercial laundries and institutions are described. (4536)

DISINFECTION OF HOSPITAL BLANKETS WITH SYNTHETIC PHENOLIC COMPOUNDS. I. M. Larkin, E. Y. Bridson, W. S. M. Grieve, and J. W. Gibson. J. Chim. Path. 14, No. 1: 80-84 (1961). Through BCIRA 41: 2013 (1961).
A mixture of halogenated alkyl-aryl phenols, Hycolin (1/2% solution), is used. Its effectiveness is assessed and trials are described (cost, 3d. per blanket). (4537)

CONTINUOUS LEACHING OF FIBERS. K. N. Belonogov. Trudy Ivanovsk. Khim. Tekhnol Inst. No. 6: 145-151 (1958). Through BCIRA 41: 2370 (1961).
Formulas and calculations are given of changes in the concentration of zinc chloride solution during continuous leaching of fibers; the effect of fiber diameter is considered. (4538)

MODERN SHRINK-RESIST FINISHES FOR WOOL. A. N. Davidson (Wool Inds. Research Assoc.). Dyer 126: 168-169 (Aug. 11, 1961).
The following methods are briefly described: Melafix CH; Melafix II; Dylan Z; Dylanize; potassium permanganate in saturated salt; peracetic acid and sodium hypochlorite. (4539)

WOOL FABRIC STABILIZATION BY INTERFACIAL POLYMERIZATION. PART 1. POLYAMIDES. R. E. Whitfield, L. A. Miller, and W. L. Wasley (Western Reg. Research Lab.). Textile Research J. 31: 704-712 (Aug. 1961).
The present paper reports the general scope of treatment of wool fabrics with polyamides by interfacial polymerization to make them shrink resistant, demonstrates the effect of several reaction variables on the treatment, and describes the effect of the treatment on various chemical and physical properties of the wool. 27 refs. (4540)

FACTORS AFFECTING PRODUCTION AND PERFORMANCE OF WASHABLE WOOL KNITWEAR. J. McPhee. Knitted Outerwear Times 30: 32, 45 (Aug. 28, 1961).
For satisfactory production and performance of shrink-resistant knitwear, the important factors of fabric construction, degree of chemical treatment, finishing procedures, and laundering procedures must be considered simultaneously. (4541)

THEORY OF SHRINKPROOFING OF WOOL. PART 2. CHEMICAL MODIFICATION OF THE FIBER SURFACE AND ITS EFFECT ON FELTING SHRINKAGE, FRICTION, AND MICROSCOPIC APPEARANCE. J. H. Bradbury (CSIRO Wool Research Labs.). Textile Research J. 31: 735-743 (Aug. 1961).
Lincoln 36's top and Merino fabric were subjected to 8 different chemical treatments, each at several levels, which included 3 well-known shrinkproofing treatments. The shrinkage of the treated material was compared with surface modification observed microscopically and frictional coefficients measured by the capstan method. There is good correlation between the amount of surface modification and the change in frictional coefficients. In agreement with the generally accepted theory of shrinkproofing, it is considered that the latter is the basic cause of shrinkproofing. This theory is adequate for most treatments but may have to be modified to account for anomalous cases such as occur on treatment with permanganate in water or on ethanol extraction. See abstr. 589/61 for previous part. 32 refs. (4542)

AVITEX Y CONCENTRATED CATIONIC SOFTENER. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 17: 12-13 (July 1961).
Properties and application are noted. (4543)

SUBSTITUTED METHYLSILOXANES FOR IMPARTING WATER REPELLENCY TO COTTON FABRIC [UBER SUBSTITUIERTE METHYLSILOXANE UND DEREN ANWENDUNG ZUR HYDROPHOBISIERUNG VON BAUMWOLLGEWEBE]. P. Hofmann. Thesis No. 3001. Zurich, 1960. 76 p. In German. Through BCIRA 41: 2170 (1961).
Siloxanes, expected to be capable of reacting with cellulose and water-soluble siloxanes were prepared and examined for water repellency. Good results were obtained, without the use of an emulsifier, by impregnating cotton fabric with an aqueous emulsion of polymethylmethylisothioureahydrochloride siloxane, substituted with 0.05 thiourea groups per Si-atom. Methylisothiourea siloxanes did not react with the cellulose. 110 refs. (4544)

ZELAN S DURABLE WATER REPELLENT. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 17: 14-18 (July 1961).
Zelan S is a cationic, aqueous dispersion particularly recommended as a finish for all types of hydrophobic synthetic fibers. It can also be applied to cotton and rayon. Properties and application, drying, and curing procedures are described. (4545)

IMPREGNATION WITH SILICONE OR PARAFFIN WAX EMULSIONS? U. Rall. Melliand 42, No. 3: 190-194 (1961).
Comparative impregnations with silicone and paraffin emulsions of various prewashed fabric types gave the following results: on cotton, the effects obtained with both types were approximately the same. Combination with a resin precondensate of the melamine type led in both cases to maximum water-repellency, the silicone finish being only superior as regards fabric handle. On wool and silk, best results were obtained with the silicone emulsion. On synthetic fibers, 40-50 g/l silicone emulsion gave maximum effects. Paraffin emulsion B on Perlon and Trevira fabrics resulted in water-uptake values of 20% or below (Bundesmann); it had no effect on Dralon. No improvement was obtained by the addition of resin precondensates. On fabric blends, maximum values were obtained with 60-80 g/l silicone emulsion. (4546)

WATER REPELLENTS FOR LAMINATED KNITS. C. Reichman. Knitted Outerwear Times 30: 3-11 (Aug. 28, 1961).
Following a discussion of various types of water repellents and their application, technical data on leading types of wax and metallic salt and silicone water repellent compounds are tabulated. Details are given on chemical basis of the compound, method of application, industry procedure, equipment, drying and curing temperatures, duration of these steps, substantivity of the water repellent to natural and synthetic fibers, and spray rating. (4547)

WASH AND WEAR TREATMENT OF WOOL FABRIC. PART 1. LITERATURE SURVEY. M. Cednäs. Medd. Tefo, Svenska Textilforskningsinst. No. 4: 1-21 (1961). In Swedish.
This work is a literature study of wash and wear treatments for wool and wash and wear properties. Part 1 describes various antifelting treatments which have been used commercially. Part 2 is a summary of the opinions of different scientists about the chemical reactions in chemical setting of wool, and it also describes industrial setting processes. The effect of cloth construction and fiber properties are described, and there is a discussion of the effect of washing and drying conditions on the wash and wear properties of wool cloths. 64 refs. (4548)

RESIN-CONTAINING AND RESIN-FREE FINISHES, WITH SPECIAL REFERENCE TO THE WASH-AND-WEAR FINISH. PART 1. G. Pusch. Melliand Textilber. 42, No. 3: 328-334 (1961). In German. Through BCIRA 41: 2547 (1961).
The development of nitrogen-containing resins (especially the reactant type), nitrogen-free resins (acetal type) and resin-free finishes is reviewed, and the problems of testing methods for the wash-and-wear effect, arising during comparison of the results obtained on cotton fabrics treated with resin-free and reactant-type finishes, are pointed out. It is shown that a minimum-iron effect is ensured not only by a good wet crease-resistance but also by a considerably reduced plasticity of the cellulosic material. 14 refs. (4549)

AVITEX DCF ANTISOIL AND ANTISTATIC FINISH FOR HYDROPHOBIC SYNTHETIC FIBER CARPETS. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 17: 8-11 (July 1961).
The properties of Avitex DCF and of the treated carpets, as well as application procedures are covered. (4550)

TEXTILE TECHNOLOGY DIGEST
Volume 18, Number 10, October 1961

Dyeing and printing D2

DICTIONARY OF DYEING AND TEXTILE PRINTING. H. Blackshaw and R. Brightman. George Newnes Ltd, London, 1961. 221 p. $4.50 approx. Through BCIRA 41: 2536 (1961).
The dictionary is intended to provide a concise source of information on the materials and the techniques employed in dyeing and printing. Terms are defined, processes and machines are illustrated by line drawings, there is a reading list (books and periodicals), and there is an alphabetical list of commercial man-made fibers. (4551)

HOW CAN DYEING EXPENSES BE ACCOUNTED FOR AND INFLUENCED? H. Renziehausen. Textil-Praxis (English ed.) No. 2: 82-84 (June 1961).
Factors affecting the accounting of direct dye costs (dyes, auxiliaries, and chemicals; power; wages and salaries) and methods of controlling them are analyzed. (4552)

CARL DUISBERG IN DYESTUFFS HISTORY. M. Schofield. Dyer 126: 161-162 (Aug. 11, 1961). (4553)

PACKAGE DYED YARNS OF ACRILAN FOR DOUBLE JERSEY. Knitted Outerwear Times 30: 23, 47 (Aug. 28, 1961).
Recommendations for preparing, package dyeing, and handling Acrilan yarns are outlined. (4554)

DYEING DRALON AND BLENDED DRALON FABRICS ON DURAND OPEN-WIDTH DYEING MACHINE. K. Hahne and H.-R. Knippen. Textil-Praxis (English ed.) No. 2: 75-76 (June 1961).
The advantages of the Durand open-width dyeing machine for Dralon are illustrated by the results of dyeings on Dralon/Cuprema and Dralon/wool blends. (4555)

SIMPLIFIED DYEING OF HIGH-BULK DRALON AND ORLON YARNS. W. Hentschke. Textil-Praxis (English ed.) No. 2: 84 (June 1961).
The methods described make it possible to dye Dralon and Orlon high-bulk yarns with disperse dyes in light shades and with basic dyes in medium and dark shades without preliminary washing and preshrinking. (4556)

ORLON TYPE 44: MULTICOLOR PIECE DYEING OF 100% ORLON. M. B. Dahlen and R. A. Pearson (E. I. du Pont de Nemours & Co.). Knitted Outerwear Times 30: 19, 49-53 (Aug. 28, 1961).
Piece-dyed multicolor effects in goods of 100% Orlon has been made possible recently by the development and introduction of Orlon 44. It is designed for use in combination with Orlon 42 to produce piece-dyeable heathers, stripes, and patterns with outstanding fastness and brightness of shade. Orlon 44 is acid dyeable and has no affinity for cationic colors. Orlon 42 is dyeable with cationic dyes, but will not accept acid dyes. The two fibers in combination can be cross dyed, or one fiber dyed with the other reserved, in one bath with essentially no bleeding or cross staining of dye. Pointers on color selection, dyeing, scouring, bleaching, stripping, softening, finishing, and fugitive tinting are included. (4557)

CONTINUOUS DYEING OF NYLON. R. E. Fletcher (Ciba Clayton Ltd). Dyer 126: 197 (Aug. 11, 1961).
This brief review of continuous dyeing methods for nylon covers the respective advantages of the pad-steam and acid-shock methods and padding with resin pigments. (4558)

RECENT DEVELOPMENTS IN DYEING ORLON ACRYLIC FIBER. J. J. Iannarone, Jr. (E. I. du Pont de Nemours & Co.). Knitted Outerwear Times 30: 17 (Aug. 28, 1961).
A summary of the more interesting developments in dyeing Orlon 42, Orlon Sayelle 21 and 24, and Orlon 44. (4559)

DYEING ZEFRAN 1207 FIBER ALONE AND IN BLENDS WITH WOOL. Dow Chem. Co. Knitted Outerwear Times 30: 29-31 (Aug. 28, 1961). (4560)

CIBACRONS ON CELLULOSE TEXTILES. F. W. Bradley. Dyer 126: 94-95 (July 28, 1961).
The full text will be published in The Cobbler. (4561)

PRACTICAL IMPLICATIONS OF DYEING THEORY. T. Vickerstaff (Imp. Chem. Inds. Ltd). Dyer 126: 166-168 (Aug. 11, 1961).
The kinetic aspects of cellulose dyeing with reactive dyes and their practical implications are discussed. (4562)

FANCY TONE-IN-TONE COTTON FABRICS. H. Beiertz. Textil-Praxis (English ed.) No. 2: 72-74 (June 1961).
Details for dyeing embossed cotton fabrics with direct dyes are described. The difficulties inherent in the dyeing due to the use of poor quality cotton or viscose rayon effect yarns on the cotton ground weave and methods for increasing dye affinity for the effect yarns are stressed. (4563)

RECENT DEVELOPMENTS IN DYEING AND PRINTING DYNEL MODACRYLIC FIBER. PART 1. A NEW LOW TEMPERATURE APPROACH TO STOCK DYEING. PART 2. PRINTING PILE FABRICS CONTAINING DYNEL FIBER. Union Carbide Chem. Co. Am. Textile Reptr. 75: 47-53 (Aug. 17, 1961).
Part 1 reviews the general characteristics of Dynel staple fiber and the techniques for dyeing Dynel fiber at the boil. The advantages of stock dyeing at lower temperatures with dye carriers are cited, and typical procedures are described. Part 2 covers ink formulation and print fixation procedures for pile fabrics composed of Dynel fiber blends with mohair or silk and for pile fabrics containing Dynel fiber or blends of Dynel and Orlon. (4564)

LATYL DISPERSE PASTES. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 17: 19-22 (July 1961).
The advantages of the Latyl pastes over the parent powder dyes for dyeing Dacron are described. (4565)

INFLUENCE OF BENZYL ALCOHOL ON THE DYEING OF TERYLENE. G. Colombo. Notiziario Tec. Tess. 10, No. 2: 31-35 (1960). In Italian. Through BCIRA 41: 1925 (1961).
A series of experiments to find the most effective method of dyeing Terylene is described. Statistical tables are given, showing the effect of varying time of immersion, temperature, dyes, and assistants. (4566)

FASTNESS OF CATIONIC DYE PRINTS ON ORLON TYPE 42. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 17: 45-50 (July 1961).
Procedures for printing paste formulation and processing are given. Data on fastness to crocking, pleating, drycleaning, light, perspiration, ironing, and washing are included. (4567)

MECHANISM OF CARRIER ACTION FOR POLYETHYLENE TEREPHTHALATE FIBERS. K. Fujino, N. Fujimoto, and K. Eto. J. Textile Machy. Soc. Japan 14, No. 4: 291-296 (1961). In Japanese (English summary). Through BCIRA 41: 2338 (1961).
It is assumed that the carrier loosens the fiber structure. The shrinking temperature of the fiber treated with carrier was measured, and the sorption isotherms of various carriers on the fiber were investigated. (4568)

DYEING BEHAVIOR OF AVRIL (FIBER 40). Am. Viscose Corp. Am. Textile Reptr. 75: 43, 45 (Aug. 17, 1961).
Dyes commonly used for cellulosic fibers can be used in dyeing Fiber 40. These include direct, diazotized and developed, vat, napthol, sulfur, and fiber-reactive dyestuffs. A full range of shades can be produced, including navy and black. The behavior of the various classes of dyes is described. (4569)

FORMATION OF METAL-CONTAINING COMPLEXES OF NITROSO DYES DIRECTLY ON PROTEIN FIBERS. P. I. Mikhailenko. Trudy Khar'kov. Politekh. Inst. im. V. I. Lenina, Ser. Khim.-Tekhnol. 26, No. 6: 113-121 (1959). Summary in Chem. Abstr. 12859g (1961). (4570)

PLEATING FASTNESS OF CATIONIC DYES ON DACRON TYPE 64 AND 62. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 17: 51-53 (July 1961). (4571)

FASTNESS OF DISPERSE DYE PRINTS ON DACRON TYPE 56. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 17: 35-44 (July 1961).
Fastness to pleating, crocking, drycleaning, and light are tabulated. Information on printing paste preparation and dry heat fixation of prints is included. (4572)

FASTNESS TO DRYCLEANING OF VAT DYES ON COTTON. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 17: 31-34 (July 1961). (4573)

SHADE CHANGE OF DISPERSE DYES IN INCANDESCENT LIGHT. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 17: 29-30 (July 1961).
Shade changes of disperse dyes on Dacron 54 are tabulated. (4574)

IMPROVEMENT OF LIGHTFASTNESS OF DYEINGS ON SYNTHETIC FIBERS BY ULTRAVIOLET ABSORBERS. PART 1. A. F. Strobel (Antara Chemicals). Am. Dyestuff Reptr. 50: 583-588 (Aug. 7, 1961).
The fastness to light of well-leveling dyes on nylon, Dacron, and Orlon is said to be improved by co-dyeing with a new ultraviolet light absorber, Uvinul D-49 (Antara Chemicals). On nylon and Dacron, commercially available UV light absorbers, such as Uvinul D-49, definitely improve the lightfastness of well-leveling colors. The carbon-arc light was used in these accelerated tests. Dyeing affinity, application techniques, and stability of the UV absorbers applied alone on Dacron, nylon, and Orlon were determined. 10 refs. (4575)

DOELL HOMOGENIZER FOR RECONDITIONING PASTES AND PREPARING DISPERSIONS. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 17: 23-27 (July 1961).
Laboratory applications are summarized. (4576)

LIGHTFASTNESS STUDIES OF BASIC DYES ON ACID-MODIFIED DACRON POLYESTER FIBER. S. B. Maerov and H. Kobsa (E. I. du Pont de Nemours & Co.). Textile Research J. 31: 697-703 (Aug. 1961).
A variety of basic dyes of the Sevron and Dekatyl type, recommended expressly for Types 62 and 64 Dacron, may be applied with adequate lightfastness. Some basic dyes have, however, shown inadequate lightfastness when applied to this fiber. The purpose of these studies was to determine the spectral regions responsible for the fading of these dyes and to determine means for upgrading their lightfastness. The results indicate that the Critical Fading Region is a rather narrow spectral region extending from 350 to 425 mμ, and that the use of UV absorbers may be useful in upgrading lightfastness. 10 refs. (4577)

LABORATORY APPARATUS FOR TESTING OF DYES AND DYEING PROCESSES. J. Hornung and B. Mihalik. Magyar Textiltech. 11: 358-360 (1959). Summary in Chem. Abstr. 55: 12860g (1961). (4578)

RECENT DYEING AND FINISHING DEVELOPMENTS IN EUROPE. Knitted Outerwear Times 30: 37-39 (Aug. 28, 1961).
Features of the following new machines are noted: high temperature dyeing machines (Longclose Eng. Co. Ltd and B. Thies Spezialmaschinenfabrik); dyeing jigs (Kovo Export, Gebr. Poensgen, and Industrie Co.); high pressure dyeing units (Saml. Pegg & Co. Ltd and Longclose Eng. Co. Ltd); screen printing machines (Maschinenfabrik Zimmer, Meccanotessile, and Commerio Ercole SpA); and a polyvinyl chloride coating and gelling installation (Sir James Farmer Norton & Co. Ltd). (4579)

DYEING OF CIRCULAR KNIT CLOTH ON BEAM DYEING MACHINE. G. C. Ward (Celanese Fibers Co.). Knitted Outerwear Times 30: 35 (Aug. 28, 1961).
The advantages and limitations of the process are discussed. (4580)

VAT DYEING TODAY. PART 5. O. W. Clark (Am. Cyanamid Co.). Textile World 111: 84-85, 88-90 (Aug. 1961).
Package preparation and package dyeing procedures for cotton, viscose, and wool are covered. (4581)

EFFECT OF AIR ON SORPTION OF DIRECT DYES BY CELLULOSE. N. D. Il'yashchuk, F. I. Sadov, S. A. Melikhov, and I. N. Kalinina. Zhur. Priklad. Khim. 34: 902-908 (1961). Summary in Chem. Abstr. 55: 15937a (1961). (4582)

DYE AND THE FIBER: STUDY OF THE MOVEMENT OF DYE MOLECULES WITHIN THE FIBER. R. McGregor (Univ. Manchester). Dyer 126: 169-170 (Aug. 11, 1961).
The importance of dye diffusion and distribution studies as research tools for elucidating dyeing mechanisms and improving dyeing methods is briefly discussed. (4583)

INTERACTION BETWEEN SOME ACID WOOL DYES AND NONYL PHENOL-ETHYLENE OXIDE DERIVATIVES. B. R. Craven and A. Datyner. J. Soc. Dyers Colourists 77: 304-312 (July 1961).
Acid wool dyes show individual differences in behavior towards nonionic surfactants. Dyeing experiments and spectrophotometric measurements indicate that the degree of interaction between dyes and nonionic surfactants of the nonyl phenol-ethylene oxide type increases with the hydrophobic nature of the dye. (4584)

ADSORPTION OF DIRECT COTTON DYES BY CHEMICALLY MODIFIED CELLULOSES. E. H. Daruwalla, P. J. Kangle, and G. M. Nabar (Univ. Bombay). Textile Research J. 31: 712-721 (Aug. 1961).
Equilibrium adsorption of two direct cotton dyes on cellulose oxidized with specific oxidizing agents and by the products of reduction of these oxycelluloses, under standard conditions of dyeing has been studied. Conversion of hydroxyl groups of cellulose to carbonyl groups does not influence dye adsorption, but formation of ionizable carboxyl groups in cellulose chain molecules brings about an appreciable reduction in dye uptake, the extent of reduction being independent of the position in the glucose units of cellulose at which the carboxyl group is formed. Only a fraction of the total carboxyl groups is responsible for the reduction in dye adsorption under specific conditions of dyeing, and with progressive increase in the total carboxyl content of cellulose, the value of this fraction goes on decreasing continuously. 27 refs. (4585)

INVESTIGATION INTO AND INTERPRETATION OF THE MECHANISM OF DYEING. H. Zollinger. Palette No. 6: 28-30 (1960). Through BCIRA 41: 1916 (1961).
The characteristics of the Nernst, Langmuir, and Freundlich adsorption isotherms are explained, and dyeing processes which correspond to each of these are pointed out. In certain dyeing processes two of the mechanisms may occur simultaneously. A brief report is given of a study of the adsorption isotherms for some acid dyes on various kinds of polyamides, the purpose of which is to obtain information enabling acid dyes to be chosen that are specifically suitable for a given fiber. (4586)

METAL COMPLEXES OF ALIZARINE (1,2-DIHYDROXYANTHRAQUINONE). E. G. Kiel. Uitgeverij Waltman, Delft. 198 p. In Dutch (English summary). Through BCIRA 41: 1912 (1961).
This is a thesis; it draws attention particularly to the calcium-aluminum complex, and reports on an examination of the alizarine dyeing process. (4587)

LATYL DIAZO BLACK ND. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 17: 5-7 (July 1961).
Latyl Diazo Black ND has been especially developed for use in the pressure dyeing of stock, top, tow, and yarn of Dacron. It produces black shades economically and has exceptionally good fastness to light and wet processing. It is also of interest for dyeing Acrilan, Arnel, Kodel, nylon 66, and Vycron. Fastness properties and application procedures are described. (4588)

SEVRON YELLOW 2R. E. I. du Pont de Nemours & Co. Dyes & Chem. Tech. Bull. 17: 1-4 (July 1961).
Sevron Yellow 2R possesses all of the properties required of a dye for Orlon acrylic fiber and is also of interest for Dacron 62 and 64. Its fastness and application properties are tabulated. (4589)

CONSTITUTION AND APPLICATION OF VAT DYES. E. R. Schober (Putnam Chem. Corp.). Can. Textile J. 78: 37-41 (Aug. 4, 1961).
This paper discusses the importance and behavior of various vat dyes, and outlines some possibilities to improve existing difficulties. A brief history of vat dyes and their chemistry is presented, as well as data on correct hydro and caustic amounts and their importance for level performance and fastness, and information on pigmentation methods. (4590)

STUDIES IN THE LIGHT ABSORPTION OF DYES. PART 4. RELATION OF TRANSMISSION AND REFLECTION OF LIGHT BY DIFFUSING MATERIALS TO CONCENTRATION OF COLOR. C. H. Giles, S. M. K. Rahman, and D. Smith (Royal Coll. Sci. & Technol., Glasgow). Textile Research J. 31: 679-687 (Aug. 1961).
A linear relation between the logarithm of the color concentration of a diffusely reflecting colored surface and its reflectance density is derived as a simple extension of Beer's law and confirmed experimentally using a variety of dyed fabrics. 18 refs. (4591)

CUMULATIVE EFFECT OF IRON IONS ON SHADE. Am. Cyanamid Co., Bound Brook, N. J. Dyelines 6, No. 4: 1 (1961).
The use of a sequestering agent in dyebaths to overcome the off-shades caused by iron ions is recommended. (4592)

NEW SYSTEM OF DYEING PATTERNS ON KNITTED AND WOVEN GOODS. H. vom Hove. Melliand 42, No. 3: 178-180 (1961).
The system described for the preparation of pattern samples consists in sewing the knitted or woven sample onto a stainless steel gauze with a gage of about 25 to 30 mesh/sq cm. The flat gauze is then rolled to the shape of a cylinder which is fixed with screws; the gauze cylinder is put into a beaker or stainless steel container where the dyeing process takes place; for larger patterns a mechanically driven apparatus is used. (4593)

ESTIMATING THE CONSUMPTION OF PRINTING PASTES FOR NEW PATTERNS. Melliand 42, No. 3: 194 (1961). (4594)

CONTRIBUTION TO THE STUDY OF REACTIVE DYES IN PRINTING. E. F. Metzger. Teintex 26, No. 4: 247-254 (1961). In French. Through BCIRA 41: 2544 (1961).
The problems arising during printing with reactive dyes and the requirements to be satisfied by these dyes are reviewed, with special reference to high solubility and minimum sensitivity to salt, high stability in alkaline medium at low temperature, sufficient reactivity at high temperatures, formation of a stable chemical linkage with the fiber, easy elimination of unfixed particles by washing, high brilliancy, and good general fastness. (4595)

ICHINOSE AUTOMATIC SCREEN PRINTING MACHINE. Toshin Kogyo Co. Ltd. Man-Made Textiles 37: 47-48 (Aug. 1961).
The Ichinose is available as both a standard or variable repeat machine in various working widths up to a maximum of 60 in. The operation and features of the variable repeat screen printer are described. (4596)

SCREEN PRINTING OF FABRIC VIA AUTOMATIC MACHINERY. F. Perutz (Lana Knitwear). Knitted Outerwear Times 30: 41 (Aug. 28, 1961).
The differences of the various types of automatic machines in use in the United States (Comerio, Stork, Thorne, Ichinose, Buser, Reggiano, and Zimmer) are briefly described. (4597)

Mechanical processes D3

AQUAROLL MANGLE. Kusters, Krefeld, Germany. Daily News Record No. 157: 31 (Aug. 14, 1961).
See abstr. 4496/60. (4598)

WEB GUIDE AND EDGE POSITION CONTROL. Melliand 42, No. 3: 198-200 (1961).
The system described utilizes a hydraulic web positioning system controlled by means of a photoelectric or air nozzle edge sensing means. (4599)

ADJUSTMENT OF THE THREAD AT RIGHT ANGLES DURING HANDLING. C. Gerenne. Industrie Textile: 162-165 (Feb. 1961). In French. Through BCIRA 41: 2553 (1961).
The apparatus for controlling the delivery of fabrics by a machine without warping, i.e. with the weft threads exactly at right angles to the warp, is based on the use of one or more photoelectric cells. The arrangement of the cell(s), and the mechanism of the apparatus are described. (4600)

PERNICK CALENDER FOR DOUBLE JERSEY FABRICS. C. Reichman. Knitted Outerwear Times 30: 3 (Aug. 21, 1961).
The Pernick combination calender and slitting and opening machine, although primarily designed for the processing of all types of plain and jacquard patterned double jersey fabrics, is far broader in scope. It can handle plain jersey (single needle) fabrics for lamination to polyurethane foam, as well as knit elasticized swimwear fabrics turned out on either sinker top or cylinder and dial machinery. Features and operation are covered. (4601)

RAMISCH SCHREINER FINISH AND EMBOSSING CALENDER FOR WARP KNITS. Hosiery Times 34: 18-19 (July 1961).
The Ramisch 3-bowl model is preferred to the 2-bowl as it has the additional advantage that the cotton bowl is constantly being smoothed by the bottom steel roller and can be indirectly cooled or heated as required. The operation of the machine is described and the effects possible are illustrated. (4602)

PRECISION FLOCK CUTTING MACHINE. W. Muehlenberg. Melliand 42, No. 3: 158-160 (1961).
The Precision F1 flock cutting machine is a single knife machine. The operative part of the machine is a knife which in its up and down movement slides along a guiding frame to cut the fibers against a stationary bottom knife. Any length between 0.3 mm and 5 mm, and after changing two wheels, any length between 1 mm and 15 mm can be cut. For greater lengths, an additional device has to be built into the machine. A technical description is included. (4603)

USE OF RAISING MACHINES. Melliand 42, No. 3: 196 (1961).
The principles and applications of standard card wire roller and cylinder machines with steel wire fillet clothing or Perlon brushes are briefly summarized. (4604)

Drying, setting, conditioning D4

SOME FACTORS AFFECTING THE THERMOSETTING OF POLYAMIDE FIBERS. J. Janousek. Textil-Praxis (English ed.) No. 2: 77-79 (June 1961).
Quantitative measurements are made to establish relationships between the setting temperature, setting time, shrinking during setting, and residual shrinkage for Silon polyamide fiber with a view to finding optimum conditions for the production of a completely relaxed (stabilized) fiber. (4605)

TESTING AND MEASUREMENT E

Fibers E1

SOME FINDINGS CONCERNING SUBJECTIVE AND MATERIAL-DEPENDENT CAUSES OF VARIATIONS IN THE PRESSLEY TEST VALUES. H. Langer. Textil-Praxis 16, No. 4: 339-350 (1961). In German. Through BCIRA 41: 2586 (1961).
The experiments described show that good agreement between interlaboratory Pressley test results can only be expected if the tests are carried out by reliable assistants and the length-strength properties of the samples correspond to those of the standard cotton. (4606)

PERCENTAGE OF SHORT FIBERS: A VALUABLE TOOL IN EVALUATING COTTON FOR SPINNING PERFORMANCE. J. D. Tallant, L. A. Fiori, and A. V. Castillon (So. Reg. Research Lab.). Textile Bull. 87: 38-40 (Aug. 1961).
A new concept termed "Percent Effective Weight" is introduced as an analytical tool and seems to indicate that about 3/8-inch is the critical length below which fibers are incapable of being twisted into a yarn structure sufficiently to rupture and contribute to yarn strength. Various types of strength tests are discussed, and it is suggested that efforts to automate this test, especially with respect to jaw loading and sample weighing, be made. Two suggested procedures for measuring length distribution characteristics are described. One utilizes the conventional strength testers, but uses a modified procedure of specimen preparation which allows the short fibers to remain in the specimen. The other procedure suggests an optical principle which requires no specimen preparation. 16 refs. (4607)

Yarns E2

NEP COUNTING AT THE CARD. A. Linnert (Cotton Silk & Manmade Fibres Research Assoc.). J. Textile Inst. 52: P289-P295 (July 1961).
Various techniques for taking pieces of the web and counting neps have been examined at the Shirley Institute, and the method described was adopted. Uniform samples of the card web are placed on boards and a counting template is superimposed. Differences of about 15% in nep count at the card web can be detected by eye in the yarn wrapped on blackboards. To detect a difference of 15% in the nep count of two samples, about 36 boards of each would need to be taken. Much bigger differences than 15% are, however, normally found in the mills, and these differences would be detected with a correspondingly smaller number of boards. (4608)

ELECTRONIC YARN MONITOR. Short Bros. & Harland Ltd. Daily News Record No. 157: 32 (Aug. 14, 1961).
The Automatic Monitor Yarn inspects yarn at 1800 ft/min and measures the amount and length of thickening. (4609)

NEP COUNTING AT THE COMBER WEB. B. K. Basu (English Sewing Cotton Co. Ltd). J. Textile Inst. 52: P295-P297 (July 1961).
The method described is a modification of the Shirley Institute card web-nep counting method and also utilizes a board and template. Its primary use is to give a measure of comber performance. (4610)

Fabrics E3

TEAR-STRENGTH TESTING OF FABRICS. R. Riso. Riv. Industr. Cotoniera 15, No. 2: 115-118; No. 3: 169-172; No. 4: 237-241 (1961). In Italian. Through BCIRA 41: 2597 (1961). (4611)

QUICK METHOD FOR DETERMINING THE ELONGATION, THE BREAKING AND TEARING STRENGTHS OF PLAIN WOVEN FABRICS. G. L. Louis and L. A. Fiori (So. Utilization Research & Develop. Div.). (Letter to the editor). Textile Research J. 31: 754-756 (Aug. 1961).
An abbreviated method which deviates from the conventional procedure (where warp and filling directions are tested separately) for quickly determining fabric breaking strength, elongation, and fabric tearing strength is suggested. The method involves composite testing of fabric samples: two conventionally prepared fabric samples, one warpwise, the other fillingwise, are superimposed on each other, loaded on the apparatus, and tested simultaneously. (4612)

Other E4

FLUORESCENT TUBES FOR COLOR MATCHING AND MEASUREMENT. W. Harrison. Textile Weekly 61 (2): 272, 274 (Aug. 4, 1961).
The development of different color fluorescent tubes in various combinations and of a colorimeter based on miniature tubes of this type is described. (4613)

THERMOTEST APPARATUS. C. Duval. Industrie Textile: 129-131 (Feb. 1961). In French. Through BCIRA 41: 2604 (1961).
The apparatus described can be used for determining the yellowing temperature of optical bleaching agents, color changes in dyeings, sublimation of dyes, browning temperature, etc. The reproducibility of the results is very good and the test is rapid (about 5 min for each fabric). (4614)

SRI ELECTRONIC MOISTURE METER FOR TEXTILES AND SIMILAR HYGROSCOPIC MATERIALS. A. Pande. Instrum. Pract. 15, No. 4: 432-438 (1961). Through BCIRA 41: 2193 (1961).
Details are given of the design, calibration, and operation of an improved capacitance-type moisture meter that has been developed at the Shri Ram Institute for Industrial Research, Delhi. (4615)

DETERMINATION OF THE WEIGHTING AGENT ON SILK. P. Carboni. Riv. Tessile 37, No. 4: 121-124 (1961). In Italian. Through BCIRA 41: 2600 (1961).
Three methods (determination by dry distillation and by oxidation with permanganate in alkaline medium, respectively, and the Kjeldahl determination of organic nitrogen) are described, and some results obtained for inorganic and organic weighting agents are tabulated. (4616)

METHOD FOR DETERMINING THE IODINE VALUE OF FATTY EXTRACTS OF WOOL. R. S. Hartley and B. C. Hobson (Wool Inds. Research Assoc.). J. Textile Inst. 52: T321-T323 (July 1961).
A method is described for the determination of iodine values of oils and fatty extracts from wool by bromine absorption using between 0.02 g and 0.05 g of fatty matter. This method can be used in conjunction with the W.I.R.A. rapid extraction unit. 4 refs. (4617)

DETECTION, ISOLATION, AND IDENTIFICATION OF SURFACE ACTIVE AGENTS. M. J. Rosen (Brooklyn Coll.). J. Soc. Cosmetic Chemists 12: 98-106 (1961). Summary in Chem. Abstr. 55: 12891f (1961). (4618)

MECHANIZATION OF METHODS FOR TESTING THE FASTNESS OF DYEINGS AND THE EFFICIENCY OF DETERGENTS. G. von Hornuff. Deut. Textiltech. 11, No. 3: 157-162 (1961). In German. Through BCIRA 41: 2603 (1961).
The advantages and disadvantages of manual and machine tests are discussed, and the available mechanical devices for testing the fastnesses of dyeings and the washing activity of detergents (Launderometer, Prexa-apparatus, wash-wheel, Marney dyeing machine, GOST apparatus, Franke-device, etc.) are critically reviewed. Simple laboratory devices are examined for their suitability as testing devices and compared. A promising new apparatus is described. (4619)

DETERMINATION OF FATTY MATTER IN SCOURED WOOL AND TOPS. PART 2. INVESTIGATION OF THE REFRACTIVE INDEX METHOD FOR THE DETERMINATION OF COMBING OIL IN SOLVENT EXTRACTS FROM WOOL TOPS. R. P. Harker (Wool Inds. Research Assoc.). J. Textile Inst. 52: T309-T316 (July 1961).
The refractive index method for determination of percentage combing oil in solvent extracts from tops has been examined critically, and a method which makes provision for the assessment of interference by other constituents has been developed. For accurate determinations, appropriate standards for each batch being processed must be available, and the method cannot be applied to samples of unknown origin with confidence. 6 refs. (4620)

DETERMINATION OF FATTY MATTER IN SCOURED WOOL AND TOPS. PART 3. EVIDENCE FOR THE EXISTENCE OF A BARRIER TO NON-POLAR SOLVENTS. R. P. Harker (Wool Inds. Research Assoc.). J. Textile Inst. 52: T317-T320 (July 1961).
The existence of a barrier to non-polar solvents has been shown to operate during solvent extraction of scoured wool and tops, and a mechanism for the formation of such a complex layer is proposed by analogy with the phase separations observed with soap-amphiphile-water systems. Direct evidence for the existence of a complex protective layer has been obtained by extraction experiments on grease layers. 5 refs. (4621)

MILL MANAGEMENT F

MERITS OF REEQUIPMENT. W. Slater (T.M.M. Research Ltd). Textile Recorder 78: 42-44, 46, 53 (Aug. 1961).
Economic and organizational factors involved in the reequipment of spinning mills are discussed. (4622)

REEQUIPMENT IN COTTON SPINNING. W. Nutter (T.M.M. Research Ltd). Textile Recorder 78: 45-46 (Aug. 1961).
Technical considerations are discussed. (4623)

GRANTVILLE STORY: INTEGRATION AND MODERNIZATION. Textile World 111: 54-63 (Aug. 1961).
This 4-part case history on the only fully integrated mill making thermal underwear includes details on spinning and knitting layout, quality and cost control, and plant services. (4624)

MODERN MILL FOREMEN. T. O. Moore (P. H. Hanes Knitting Co.). Am. Textile Reptr. 75: 31-33 (Aug. 24, 1961).
The qualifications of a supervisor or foreman are analyzed. (4625)

MOTOR POOL ORGANIZATION IN TEXTILE FACTORIES. W. Schulze. Textil-Praxis (English ed.) No. 2: 85-86 (June 1961). (4626)

Industrial engineering F1

GETTING TOP MAINTENANCE MEN. G. L. Howard (Lockheed Aircraft Corp.). Textile World 111: 68-69 (Aug. 1961).
Pointers on setting up a program for training maintenance specialists are given. (4627)

TRAINING SCHEME FOR OUT-MENDERS. PART 1. B. Shackleton. Textile Recorder 78: 56-58 (Aug. 1961).
A training scheme for out-menders which has been successfully operated by a small firm of worsted fabric manufacturers is described. (4628)

FRESH LOOK AT QUALITY CONTROL. A. Tavaler (Merino Worsted Spinning Mills Ltd). Textile World 111: 64-67 (Aug. 1961).
An effective quality control program depends not only on the tests used, but also the areas covered and the interpretation and application of test results. The present article summarizes criteria for evaluating existing systems. (4629)

QUALITY CONTROL IN DYEING AND FINISHING. W. T. Holliday (Riegel Textile Corp.). Am. Textile Reptr. 75: 73, 77 (Aug. 17, 1961).
Key points in achieving maximum quality in wet processing and techniques for their control are summarized. (4630)

PATROL AND SUPERVISION TIME--AN IMPORTANT PROBLEM IN MULTIMACHINE ATTENDANCE. W. Sassmannshausen. Spinner u. Weber 79, No. 4: 344-354 (1961). In German. Through BCIRA 41: 2678 (1961).
A new method of calculating patrol and supervision times is reported. In all examples and calculations, neither the stopping times of the machines nor the time for distributing the working material were taken into consideration. (4631)

WATER TREATMENT IN THE TEXTILE INDUSTRY. F. Rib. Spinner u. Weber 79, No. 4: 338-342 (1961). In German. Through BCIRA 41: 2612 (1961). (4632)

BIOLOGICAL TREATMENT OF EFFLUENTS FROM VISCOSE RAYON MANUFACTURE IN LABORATORY MODELS OF ACTIVATED-SLUDGE TANKS. D. Resetka. Sci. Pap. Inst. Chem. Technol., Prague, Fac. Technol. Fuel Wat. 3, Part 1: 191-228 (1959). In Czech (English summary). Through Water Polution Abstr. 34, No. 5: 925 (1961).
Laboratory experiments have shown that, after neutralization, waste waters from viscose rayon manufacture can be treated satisfactorily by the activated-sludge process if a source of nutrients, such as domestic sewage, is provided. (4633)

TREATMENT OF VISCOSE RAYON WASTES. G. M. Neas. Proc. 14th Industr. Waste Conf., Purdue Univ. Engineering Extension Ser. No. 104: 450-455 (1959). Through Water Polution Abstr. 34, No. 5: 924 (1961).
Sources of waste water in viscose rayon manufacture are discussed, and treatment methods are described. (4634)

Plant and equipment F2

VENTILATION OF WORKROOMS AND REMOVAL OF VAPORS IN THE TEXTILE INDUSTRY. H. Wilke. Spinner u. Weber 79, No. 4: 330-336 (1961). In German. Through BCIRA 41: 2611 (1961).
Room ventilation in so far as it is of interest for textile technology is discussed, and tables and diagrams are given with data on favorable air conditions, maximum concentrations of various vapors, heat and water-vapor discharge by the human body, etc. (4635)

SUPERSATURATED AIR CONDITIONING. R. Veil. Textil-Praxis (English ed.) No. 2: 88-89 (June 1961).
The construction and mode of operation of a supersaturated air conditioning plant are explained. (4636)

ROLLER CHAIN DRIVES WITH PLASTIC BEARINGS. E. Kunze. Textil-Praxis (English ed.) No. 2: 86-88 (June 1961).
The advantages of roller chain drives with plastic bearings in comparison with normal roller chains are described. (4637)

HOW THE SILICON CONTROLLED RECTIFIER CAN BE APPLIED TO TEXTILE EQUIPMENT IN THE MILLS. W. E. Cronquist. Textile Bull. 87: 49-50 (Aug. 1961).
The electrical characteristics of the conventional silicon rectifier and silicon controlled rectifier are compared, and the use of the latter for adjustable speed dc drives, speed and voltage regulators, and adjustable speed ac drives is discussed. (4638)

TRANSISTORS. R. Kretzmann. Textil-Praxis (English ed.) No. 2: 90-93 (June 1961).
The qualitative processes involved in signal amplification by means of transistors are explained, and the advantages and limitations of transistors for automatic control devices are described. (4639)

MOLYBDENUM DISULFIDE-CONTAINING LUBRICANTS FOR TEXTILE MACHINES. E. Tschanter. Spinner u. Weber 79, No. 4: 323-326 (1961). In German. Through BCIRA 41: 2610 (1961).
Starting from the crystal structure of molybdenum disulfide, the author describes the physical and chemical properties and the main types of new lubricants used in textile technology. Some experiences of textile plants using Molykote lubrication are reported; these lubricants are of particular advantage in the case of high pressures, high temperatures, and high velocities. (4640)

ECONOMIC ADVANTAGES OF HIGH-TEMPERATURE HEATING SYSTEM WITH LOW-PRESSURE HEAT CARRIERS. U. W. Beier. Melliand 42, No. 3: 200-202 (1961).
The economic and technical advantages and applications of the system previously described (see abstr. 2202/61) are summarized. (4641)

LUBRICATION AT POINT CONTACTS. J. F. Archard and M. T. Kirk. Proc. Roy. Soc. A 261: 532-550 (May 23, 1961). Through BCIRA 41: 2668 (1961).
Measurements have been made of the friction, electrical resistance, and electrical capacity between rotating steel cylinders with their axes mutually at right angles. The lubricant was a plain hydrocarbon mineral oil. It is shown that hydrodynamic lubrication exists over a wide range of conditions. A simplified theory of elastohydrodynamic lubrication at point contacts is developed. (4642)

ELASTOHYDRODYNAMIC LUBRICATION OF ROLLERS. G. D. Archard, F. C. Gair, and W. Hirst. Proc. Roy. Soc. A 262: 51-72 (June 13, 1961). Through BCIRA 41: 2669 (1961).
The situation when two elastic rollers are pressed together and oil is fed between them is considered. Graphical relations between film thickness, roller velocity, radius, and load have been obtained. (4643)

CERTAIN FEATURES OF THE ACTION OF NOISE IN WEAVING SHEDS AND MEASURES TO CONTROL THEM. S. S. Vishnevskaya and S. I. Gorshkov. Gigiena Truda i Profesional'nye Zabolevaniya 4, No. 11: 18-24 (1960). Through Bull. Hyg. 36, No. 6: 520-521 (1961).
The environment in weaving sheds is warm, humid, and noisy (102-105 decibels). A study of weavers showed slowing of pulse, electrocardiographic changes, a rise of skin temperature of the chest and forehead (reaching 35-36° C) not accompanied by a noticeable increase in sweat production, and a change in the correlation between the latent period of reaction to light and sound. Laboratory experiments with subjects wearing ear protectors (modified Czechoslovakian inner antiphones) are described and discussed. (4644)

NEW LOOK AT LIGHTING. PART 2. E. P. Lee. Textile Recorder 78: 54-55 (Aug. 1961).
The schedule of the recommended levels of illumination provided by the Illuminating Engineering Society is reproduced, and new trends in industrial lighting are outlined. See abstr. 3696/61 for Part 1. (4645)

MODERN CZECHOSLOVAKIAN TEXTILE MACHINES AND DEVICES. Deut. Textiltech. 11, No. 3: 119-126 (1961). In German. Through BCIRA 41: 2687 (1961).
Spinning machines, preparatory machines for weaving, knitting and hosiery, weaving machines, finishing machines, and analytical balances, developed and produced in Czechoslovakia, are reviewed and technical data are given. (4646)

EUROPEAN TEXTILE MACHINERY DEVELOPMENTS. T. E. Stribling, Jr. (Werner Textile Consultants). Daily News Record No. 157: 30 (Aug. 14, 1961).
Among the developments mentioned are: shuttleless pick and pick loom, card based on aerodynamic principles, preblending system for cotton, and modified Abbott cone winder (Soc. Alsacienne de Mecanique); Carniti card resembling comber; Dubied Wevenit knitting unit for suits and coats. (4647)

POLYAMIDES IN TEXTILE ENGINEERING. E. Blank. Deut. Textiltech. 11, No. 3: 127-129 (1961). In German. Through BCIRA 41: 2606 (1961).
The advantages and limitations of the use of polyamide plastics for textile machinery components are discussed. Some examples are described and illustrated. (4648)

PLANNING AND DESIGNING NEW WEAVING SHEDS. J. Geiger. Textil-Praxis (English ed.) No. 2: 60-62 (June 1961).
The problems to be considered when planning the erection of new weaving sheds are briefly reviewed. (4649)

NEW BELT FOR TEXTILE MACHINERY. G. P. Chiorino. Riv. Tessile 37, No. 4: 107-110 (1961). In Italian. Through BCIRA 41: 2609 (1961).
The properties and advantages of nylon/leather transmission belts are discussed. (4650)

SCIENCES G

Chemistry G1

ACTION OF AQUEOUS LITHIUM SOLUTIONS ON CELLULOSE-I AND CELLULOSE-II. K. G. Ashar. Compt. Rend. 252: 734-736 (1961). Summary in Chem. Abstr. 55: 14903e (1961). (4651)

EVIDENCE FOR THE RETENTION OF THE CRYSTALLINE-AMORPHOUS RATIO OF CELLULOSE DURING HETEROGENEOUS ACID HYDROLYSIS. J. J. McKeown and W. I. Lyness (Procter & Gamble Co.). J. Polymer Sci. 47: 9-17 (1960). Summary in Chem. Abstr. 55: 14905f (1961). (4652)

DETERMINATION OF THE CARBONYL GROUPS IN HYDROCELLULOSE. K. Christofferson and O. Samuelson (Tech. Univ., Göteborg). Svensk Papperstidn. 64: 195-197 (1961). In English. Summary in Chem. Abstr. 55: 14905h (1961). (4653)

STUDY OF ACCESSIBILITY OF CELLULOSE FIBERS. PART 1. EFFECTS OF DRYING CONDITIONS ON THE ACCESSIBILITY OF CELLULOSE FIBERS. S. Ishikawa. Bull. Textile Research Inst. (Japan) No. 56: 7-15 (1961). In Japanese (English summary). Through BCIRA 41: 2375 (1961).
Sulfite rayon pulp and saponified-acetate rayon were examined. Different swelling media (water, methanol, acetone, mixtures) were used, and accessibilities were estimated by iodine absorption and moisture regain. Accessibility improves the faster the rate of drying and the less the affinity of the swelling medium for cellulose. (4654)

SYNTHESIS OF BLOCK AND GRAFT COPOLYMERS OF CELLULOSE AND ITS DERIVATIVES. R. J. Ceresa. Polymer 2, No. 2: 213-219 (1961). Through BCIRA 41: 2643 (1961).
Three methods are described and discussed: (1) mastication of methyl-, ethyl-, and benzyl-celluloses, cellulose acetate and starch with polymerizable vinyl monomers, (2) vapor-phase swelling of cellulose acetate with acrylonitrile monomer, and (3) freezing and thawing of starch-acrylonitrile emulsions. (4655)

SOME DIFFICULTIES IN THE COLORATION OF PLASTICS. J. M. J. Estevez (Imp. Chem. Inds. Ltd). J. Soc. Dyers Colourists 77: 300-303 (July 1961).
Some of the problems in coloring plastics raw materials are reviewed, and methods for solving them are discussed. The limitations of mechanical aids to the solution of coloring problems are indicated, and information is given on the most commonly used colorants. (4656)

DETERMINATION OF CUPRAMMONIUM FLUIDITY OF LIGNIFIED FIBERS. F. S. Young (Australian Defence Scientific Service). J. Textile Inst. 52: T324-T329 (July 1961).
A method for determining the fluidity of lignified fibers such as sisal and jute is described. It is based on the standard test for determining the cuprammonium fluidity of cotton, modified to allow for the large amount of material insoluble in cuprammonium hydroxide. The fluidity gives an estimate of the degree of chemical degradation caused by agencies such as heat, light, acid, and bleaching solutions. 3 refs. (4657)

VISCOELASTIC PROPERTIES OF ETHYLENE-PROPYLENE COPOLYMERS. G. Natta, G. Crespi, and M. Bruzzone (Polytec., Milan). Kautschuk u. Gummi 14: 54-60 (1961). Summary in Chem. Abstr. 55: 12903c (1961). (4658)

BLOCK AND GRAFT COPOLYMERIZATION. M. S. Akutin (Inst. Plastics, Moscow). Plastics Inst. Trans. (London) 28: 216-224 (1960). Summary in Chem. Abstr. 55: 15994f (1961).
49 refs. (4659)

PRECISELY CONSTRUCTED POLYMERS. G. Natta. Sci. American 205: 33-41 (Aug. 1961).
The development of stereospecific polymerization and its application in the synthesis of isotactic, polytactic, and asymmetric polymers is discussed. (4660)

SORPTION OF WATER VAPOR BY STARCH. THERMODYNAMICS AND STRUCTURAL CHANGES FOR DEXTRIN, AMYLOSE, AND AMYLOPECTIN. D. H. Volman, J. W. Simons, J. R. Seed, and C. Sterling (Univ. Calif.). J. Polymer Sci. 46: 355-364 (1960). Summary in Chem. Abstr. 55: 11997d (1961). (4661)

Physics G2

SOLUBILIZATION OF FATTY SOILS BY A RADIO-TRACER TECHNIQUE. M. E. Ginn, E. L. Brown, and J. C. Harris (Monsanto Chem. Co.). J. Am. Oil Chemists Soc. 38: 361-367 (July 1961).
A technique for measurement of solubilized radiotagged triolein and tristearin fatty soils is described and used to investigate the solubilization of fatty soil as a possible mechanism of soil removal. The nonionic alkanol- and alkylphenol-ethylene oxide adducts solubilized up to 0.058% triolein while anionic surfactant and sodium tripolyphosphate solubilization was negligible. These findings suggest for these nonionics that solubilization is one of the main, if not the controlling factor in the mechanism of soil removal. Anionic surfactants and sodium tripolyphosphate fail to exhibit effective fatty soil solubilization, hence their mechanism of soil removal appears to differ markedly from that of the ethylene oxide adducts tested. 14 refs. (4662)

EFFECTS OF NUCLEAR RADIATION ON TEXTILE MATERIALS. PART 1. CHANGE OF TEXTILE PROPERTIES OF CRIMPED NYLON STAPLE FIBER. PART 2. CHANGE OF MECHANICAL PROPERTIES OF POLYAZINE FIBER. S. Ogawa and S. Hasegawa. Bull. Textile Research Inst. (Japan) No. 56: 23-32 (1961). In Japanese (English summary). Through BCIRA 41: 2377 (1961).
The effects of irradiation with gamma-rays in air were studied. (4663)

Biology G3

DEGRADATION OF COTTON CELLULOSE BY THE EXTRACELLULAR CELLULASE OF MYROTHECIUM VERRUCARIA. K. Selby. Biochem. J. 79, No. 3: 562-566 (1961). Through BCIRA 41: 2616 (1961).
Degradation of mercerized (swollen in caustic soda without tension) and unmercerized cotton cellulose (yarn, sliver, and flock) was studied. It is concluded that the degradation, even of swollen samples, is neither random nor endwise: it is suggested that the enzyme, being composed of large molecules with restricted mobility in the substrate, removes a number of adjacent glucose residues from each of relatively few sites of attack. (4664)

MISCELLANY H

BOOKS ABOUT TEXTILES: CLASSIFIED LIST OF RECENTLY PUBLISHED LITERATURE. A. F. Kertess. Dyer 126: 96-98 (July 28, 1961). (4665)

TEXTILE MACHINERY AT THE LEIPZIG SPRING FAIR 1961. VEB Textilmaschinenbau. Deut. Textiltech. 11, No. 3: 113-119 (1961). In German. Through BCIRA 41: 2686 (1961).
Some of the spinning, winding, weaving, knitting, and finishing machines exhibited are described and illustrated. In all machines, the tendency is to standardize the individual components, if possible. (4666)

FINISHES AND FASHION. J. Ironside (Royal Coll. of Art). (Letter to the editor). J. Textile Inst. 52: P306-P308 (July 1961).
The Professor of Fashion Design at the Royal College of Art gives her views on the influence of the newer finishes on fashion. (4667)

SYNTHETICS--GROWTH OR DECLINE? E. J. Chornyei (Bradford Dyeing Assoc., U.S.A.). Can. Textile J. 78: 45-46 (Aug. 4, 1961).
The changes in consumer preference from cotton to manmade fibers and back to cotton are evaluated, and the need for future developments for manmade fibers is pointed out. (4668)

CAN THE WESTERN TEXTILE INDUSTRIES SURVIVE THE CHALLENGE OF THE EASTERN? J. F. Simpson (Simpson & Godlee Ltd). Textile Merc. 144: 508-512 (Apr. 14, 1961). (4669)

AM. TEXTILE REPORTER TEXTILE STATISTICS SECTION. Am. Textile Reporter, 286 Congress St., Boston 10, Mass. July 27, 1961. 423 p.
This annual issue includes guides to sources of products and services in the textile industry, trade associations, schools, mills, statistics on textile production and consumption, and textile mill financial statistics. (4670)

MAIN TENDENCIES OF CONTEMPORARY SCIENTIFIC RESEARCH IN THE TEXTILE INDUSTRY. G. Raes. Ann. Sci. Textiles Belges No. 4: 103-112 (1960). In French. Through BCIRA 41: 2682 (1961).
General tendencies aiming at improving the quality of textile products, study of fiber structure and of physical and chemical properties of textile materials, problems concerning spinning, preparation for weaving, and weaving, and achievements in dyeing, finishing, and making-up are discussed. (4671)

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

FIBERS A

Natural fibers A1

COTTON GIN ROLL. E. R. Castle (to Garrett Corp.). USP 2 991 512, July 11, 1961.
An improved roll for cleaning and ginning long staple cotton consists of a metallic core and a cover formed of die-cut rubber impregnated, plied fabric discs. (4672)

ROLLER COTTON GIN. F. E. Deems (to Continental Gin Co.). USP 2 994 926, Aug. 8, 1961.
Arrangement for supplying lubricant under pressure to the bearings that connect the crank shaft with the reciprocating knife structure. (4673)

PNEUMATIC CLEANER FOR ASBESTOS FIBERS. G. R. Russum (to Johns-Manville Corp.). USP 2 996 183, Aug. 15, 1961. (4674)

Manmade fibers A2

IMPROVING THE STABILITY OF POLYAMIDE FILAMENTS TO LIGHT. Vereinigte Glanzstoff Fabriken AG. BP 862 577, Mar. 15, 1961.
A polyphosphate complex produced by reacting a salt of cobalt, nickel, chromium, copper, or manganese with an alkali metal polyphosphate or polymetaphosphate is added to the spinning solution. (4675)

BASTLIKE SYNTHETIC FIBERS. M. Studer, W. Settele, and G. M. Egger (to Soc. Viscose Suisse). BP 864 488, Apr. 6, 1961.
Bastlike polyester or polyamide fibers are produced by extruding the molten polymer through a spinneret to form a flat, irregularly folded, thin-walled, tubular filament. (4676)

SPANDEX FILAMENT MANUFACTURE. E. I. du Pont de Nemours & Co. BP 870 292, June 14, 1961.
Linear segmented polymers comprising a series of polyester segments connected by urethane or thiourethane linkages to a series of nonpolyester segments consisting of at least one repeating unit of polyurea, polythiourea, or polyurea-thiourea. The nonpolyester segments contain in the chain, and directly united to the urethane or thiourethane linkages, symmetrical divalent aromatic radicals free of fused rings. (4677)

ALL-SKIN VISCOSE. B. A. Thumm (to Am. Viscose Corp.). USP 2 989 366, June 20, 1961.
The addition of ethylene diamine to the viscose spinning solution is claimed. (4678)

FLAMEPROOF CELLULOSE ACETATE FIBERS. R. C. Harrington, Jr. and J. L. Smith (to Eastman Kodak Co.). USP 2 989 406, June 20, 1961.
Aluminum pyrophosphate is incorporated in the spinning solution. (4679)

SHEATH-CORE NYLON FILAMENTS OF IMPROVED DYE RECEPTIVITY. D. G. Bannerman (to E. I. du Pont de Nemours & Co.). USP 2 989 798, June 27, 1961.
The filaments consist of a core containing amine end groups and a sheath free of amine end groups. (4680)

POLYVINYL ALCOHOL FIBERS WITH IMPROVED HEAT AND WATER RESISTANCE. T. Tomonari and S. Nomura (to Air Reduction Co. and Kurashiki Rayon Co. Ltd). USP 2 990 235, June 27, 1961.
The wet fibers are dried and subjected to treatment with vapors of lower aliphatic alcohols or superheated steam. Subsequently they may be acetalized. (4681)

POLYVINYL ALCOHOL FILAMENTS OF IMPROVED DYE AFFINITY AND RESISTANCE TO HOT WATER. T. Osugi, K. Tanabe, Y. Ohno, and T. Suda (to Air Reduction Co.). USP 2 992 204, July 11, 1961. (4682)

STABILIZING POLYAMIDE FIBERS AGAINST ULTRAVIOLET RADIATION WITH AZOLE COMPOUNDS. M. Duennenberger, A. E. Siegrist, and E. Maeder (to Ciba Ltd). USP 2 995 540, Aug. 8, 1961.
The azole compounds claimed are incorporated in the spinning solution. (4683)

YARN PRODUCTION B

FALSE TWIST CRIMPING APPARATUS. E. T. Hammond, W. H. Watson, S. L. Cole, and R. Lane (to Hindley Bros. Ltd). BP 861 387, Feb. 22, 1961. Through BCIRA 41: 2314 (1961).
The yarn is run upwards through a cylindrical heating device and then brought into contact with an endless belt traveling across the path of the yarn. The yarn is made to change its course at the belt so that contact is more than a mere point. False twist is thereby inserted. Preferably, two belts are used, fairly close together, and traveling in opposite directions, and the yarn is made to pass over one flight and under the other. In this way, the change of course is effected and the second belt removes the false twist inserted by the first. (4684)

STUFFER BOX CRIMPING APPARATUS FOR TERYLENE TOW. Canadian Industries Ltd. BP 861 502, Feb. 22, 1961. Summary in BCIRA 41: 2313 (1961). (4685)

HEAT SETTING APPARATUS FOR USE WITH HOT EDGE CRIMPER. K. Iwnicki and D. W. Smith (to Brit. Nylon Spinners Ltd). BP 869 646, June 7, 1961. (4686)

HEAT TREATMENT APPARATUS FOR SYNTHETIC FILAMENTS. L. Lax and R. Nettleship (to Pye Ltd). BP 870 061, June 14, 1961.
Means for deflecting heat from the filaments to avoid overheating if the rate of movement falls below a predetermined speed or if the movement stops. (4687)

FALSE TWIST CRIMPING APPARATUS. F. Scragg and A. A. Chubb (to E. Scragg & Sons Ltd). BP 870 175, June 14, 1961.
In an apparatus for continuously applying crimp by false twisting and heat setting, means for passing the yarn through a second heating zone under zero tension to develop latent crimp. (4688)

HEAT SETTING APPARATUS FOR CRIMPED YARNS. G. W. Muller (Switzerland). BP 870 194, June 14, 1961. (4689)

STUFFER BOX CRIMPER. H. O. Farmer (to Courtaulds Ltd). BP 870 250, June 14, 1961.
In order to reduce crimp variation the chamber is equipped with a hinged sidewall which is adapted to exert a uniform pressure on the filaments even when the hinged shutter opens to release a length of crimped filament. (4690)

FLUID TWISTER FOR FALSE TWIST CRIMPING. E. I. du Pont de Nemours & Co. BP 871 112, June 21, 1961.
Filamentary material is twisted at a rate of at least 50,000 turns per min by means of the apparatus claimed, and the process is combined with a drawing operation carried out just before, while, or after the filaments are subjected to twisting. (4691)

CONTINUOUS WINDING AND CUTTING DEVICE FOR COTTON WOOL. W. Kistler (to Kistler & Co.). BP 871 187, June 21, 1961. (4692)

MANUFACTURE OF STAPLE FIBERS BY FILAMENT DECOMPOSITION. J. Nüsslein (to Farbwerke Hoechst AG). USP 2 989 797, June 27, 1961.
Polyethylene terephthalate filaments are treated at spaced intervals with an agent consisting of guanadine carbonate and thioglycol and decomposed into staple fibers by heating. (4693)

POWER TOOL ATTACHMENT FOR CUTTING BALED COTTON. C. E. Taggart. USP 2 990 614, July 4, 1961. (4694)

FALSE TWIST CRIMPING APPARATUS. L. Ubbelohde (Germany). USP 2 991 614, July 11, 1961.
Continuous filaments are false twisted after they have been set in such a way that the twist is imparted while they are in the softened state. (4695)

APPARATUS FOR MAKING ABSORBENT COTTON WOOL BALLS DIRECTLY FROM THE CARD. F. Witschi (to Johnson & Johnson). USP 2 992 458, July 18, 1961. (4696)

DIFFERENTIALLY HEATED DRAW PIN FOR HOT DRAWING OF SYNTHETIC FILAMENTS. J. A. K. Boerma and J. W. I. Heijnis (to Am. Enka Corp.). USP 2 993 260, July 25, 1961. (4697)

TEXTILE YARN FINISH. R. D. Smith and N. Floros (to Am. Enka Corp.). USP 2 993 811, July 25, 1961.
The occurrence of barré fabrics from synthetic yarns treated with mineral oil emulsions is prevented by the use of a stearic acid ester of ethylene oxide and 2,2'-methylene bis (4-methyl-6-tertiary-butyl phenol) used in conjunction with the oil. (4698)

DIRECT SPINNING OF CONDENSER YARN. F. Leach and H. Shenton (to Permo Spinning Ltd). USP 2 995 002, Aug. 8, 1961.
The apparatus consists of a carding unit for delivering condenser yarns and a ring spinning unit for receiving and winding the yarns in successive conical layers by a chase motion. (4699)

Carding and combing B2

CARD CLOTHING. G. Roberts (Scotland). BP 868 589, May 17, 1961.
In order to avoid constant bending of the tooth at its root, the intermediate portion of the tooth between the root section and working section lies parallel to the foundation surface for part of its length. (4700)

DRIVE FOR CARDING ENGINE FLATS. Deutscher Spinnereimaschinenbau. BP 870 424, June 14, 1961.
The card flats are clamped to endless flexible driving bands by means of plates. (4701)

TRAVERSE MECHANISM FOR CARDING MACHINE SUCTION STRIPPING MECHANISM. G. Hargreaves (to Wright Hargreaves Eng. Co. Ltd). BP 870 727, June 21, 1961. (4702)

CARDING MACHINE. R. A. Rusca. BP 871 037, June 21, 1961.
The cleaning action of the lickerin is improved and the loss of fiber below the lickerin reduced by the use of a contoured lickerin cover which also covers the feed roll and reduces the air pressure above the lickerin. (4703)

BURR-REMOVAL ARRANGEMENT FOR WOOL CARDING ENGINES. A. Varga (to Carding Specialists (Canada) Ltd). USP 2 994 927, Aug. 8, 1961. (4704)

WEIGHING FEED APPARATUS FOR CARDING MACHINERY. K. G. Lytton. USP 2 995 783, Aug. 15, 1961. (4705)

Drawing and roving B3

ADJUSTABLE MEANS FOR GUIDING AND REVERSING LOWER APRON IN DOUBLE-APRON DRAFTING ARRANGEMENT. J. J. Rieter & Cie AG. BP 861 483, Feb. 22, 1961. Through BCIRA 41: 2302 (1961).
The inventors propose to use a triangular prism with one face plane, another convex and the third partly convex and partly only slightly curved. This bar has triangular protuberances at its ends, by which it rests in triangular notches in the support for the bottom drafting rollers. By lifting the bar out of the notches and turning it, three different guide surfaces can be brought into action for supporting the upper run of the lower apron. (4706)

COTTON SPEED FRAMES. H. Scowcroft (to T. M. M. (Research) Ltd). BP 861 587, Feb. 22, 1961. Through BCIRA 41: 2304 (1961).
To secure finer adjustment of the cone-drum belt shifting mechanism of a cotton speedframe in response to the bobbin building motion, auxiliary cam mechanism is associated with the belt shifting mechanism to control the datum setting of the latter in relation to the output element of the building motion. (4707)

APRON-TENSIONING DEVICE FOR DRAFTING APPARATUS. C. Warrington (to Tweedales & Smalley Ltd). BP 861 487, Feb. 22, 1961. Through BCIRA 41: 2301 (1961).
The device comprises a pivoted bracket carrying a roller, around which the apron is looped, and a helical spring anchored to the shaft for the bracket and engaging the bracket in such a way that compression of the spring urges it to turn in the direction to apply tension to the apron. (4708)

REMOVAL OF FLY IN DRAWFRAMES. J. Osbaldeston and W. Nutter (to T. M. M. (Research) Ltd). BP 861 514, Feb. 22, 1961. Through BCIRA 41: 2303 (1961).
For clearing a sliver trumpet-guide, a hood is arranged over the inlet end of the guide, with an opening through which air is sucked or blown. The principle may also be applied to the roller system, in addition to the usual wiper belts, two suction nozzles being employed, for the upper and lower rollers, respectively. (4709)

SLIVER COILING WHEELS. J. J. Rieter & Cie AG. BP 870 508, June 14, 1961.
The center line of the guide channel of the coiling wheel has a helical configuration to prevent abrupt bending of the sliver. (4710)

ELECTROMAGNETICALLY CONTROLLED LIFTER-REVERSAL MECHANISM FOR FLYER FRAMES. H. Scowcroft and J. France (to T. M. M. (Research) Ltd). BP 870 620, June 14, 1961. (4711)

BEARING ARRANGEMENT FOR BOTTOM DRAFTING ROLLS. W. Sommer (to SKF Kugellagerfabriken GmbH). USP 2 991 513, July 11, 1961.
Sealing ring for preventing entry of fly and loss of lubricant and which permits cleaning of the individual elements of the bearing without disassembling it. (4712)

LINT SEAL FOR TOP DRAFTING ROLL BEARINGS. L. M. Cotchett (to Machinecraft, Inc.). USP 2 991 514, July 11, 1961. (4713)

WORKING SURFACE FOR DRAFTING ROLLS AND APRONS. J. Rockoff (to Dayco Corp.). USP 2 991 515, July 11, 1961.
The glazing of surfaces composed of vulcanized butadiene-acrylic nitrile copolymers is prevented or minimized by the incorporation of a small amount of nickel dibutyl dithiocarbamate. (4714)

TOP DRAFTING ROLL WEIGHT TESTER. R. K. Butler (to Machinecraft, Inc.). USP 2 992 555, July 18, 1961.
Device for testing and indicating the weighting of top rolls consists in essence of a test roll which is substituted for the top roll and which is equipped with a gage for indicating the amount of deflection of the test roll's shaft by the weighting. (4715)

Spinning, winding, twisting B4

DOUBLE APRON DRAFTING MECHANISM FOR SPINNING MACHINES. K. Qllaas (to Zellwolle Lehrspinnerei GmbH). USP 2 993 238, July 25, 1961.
The cage apparatus for the upper apron is tiltable together with the upper belt and its guide device. (4716)

SPINDLE DRIVE. R. Mather (to James Mackie & Sons Ltd). BP 861 508, Feb. 22, 1961. Through BCIRA 41: 2306 (1961).
The overlapping ends of a nylon belt for driving spindles are joined by a number of pieces of nylon tape having a lower melting point. A series of gaps is left at the joint to make the belt more flexible. (4717)

DRAW TWISTING APPARATUS. Chemstrand Corp. BP 870 219, June 14, 1961.
See abstr. 2587/60. (4718)

YARN WINDING DEVICE FOR SPINNING MACHINES. Barmer Maschinenfabrik AG. BP 870 402, June 14, 1961.
The packages are arranged on tubes on overhung carrier spindles disposed horizontally and perpendicularly to the longitudinal direction of the machine. Beside each spindle is mounted separate and independent means for doffing the wound package. (4719)

DRIVING GEAR FOR SPINDLES OF SPINNING, DOUBLING, AND TWISTING MACHINES. J. Bradshaw and F. A. Greenwood (to T. M. M. (Research) Ltd). BP 870 406, June 14, 1961.
The driving train consists of a bevel gear on the spindle blade, a bevel gear on a driving shaft, and an intermediate bevel gear. The drive is transmitted from the shaft through frictional contact of the gears and the intermediate gear may be automatically disconnected by means of a braking mechanism. (4720)

BALLOON DRIVEN TWISTING HEAD FOR PLYING APPARATUS. Pirelli SpA. BP 870 615, June 14, 1961. (4721)

YARN TWIST CONTROL DEVICE FOR SPINNING FRAMES. K. Varley (England). BP 870 999, June 21, 1961. (4722)

MULTIPLE VORTEX PNEUMATIC TWISTER FOR PRODUCING ALTERNATE TWIST YARN. W. W. Bunting, Jr. and L. Cenzato (to E. I. du Pont de Nemours & Co.). USP 2 990 671, July 4, 1961. (4723)

SPINNING MACHINE FRAME. L. Birkigt (to Brevets Aero-Mecaniques SA). USP 2 993 331, July 25, 1961.
The frame consists of a series of base elements resting on the ground in a row and a series of inverted U-shaped elements carried by the base elements and extending above them which serve as guides for the ring rail as well as supports for the upper elements of the machine. (4724)

HIGH DRAFT DOUBLE APRON DRAFTING MECHANISM FOR SPINNING MACHINES. K. Quaas (to Zellwolle-Lehrspinnerei GmbH). USP 2 994 086, July 25, 1961.
The mechanism claimed has an independently mounted, fixed guide rail for the bottom apron and a guide yoke, mounted on the apron cradle, for the top apron. The distance between the fixed guide rail and the yoke is variable by the use of interchangeable guide yokes. (4725)

HIGH SPEED TWISTING APPARATUS WITH MAGNETIC BUILDER MECHANISM. C. P. Geen. USP 2 995 003, Aug. 8, 1961. (4726)

SPINNING AND TWISTING RING LUBRICATION. R. Ragan. USP 2 995 004, Aug. 8, 1961. (4727)

SPINDLE MOUNTING IN DIRECT DRIVE MACHINES. W. Leutert (to Brevets Aero-Mecaniques SA). USP 2 994 182, Aug. 1, 1961.
In order to reduce the expansion of the spindle rail with respect to the ring rail in direct drive spinning machines, the spindle rail is divided into a number of separate sections arranged in an endwise relation and so mounted that one end of each section is free to expand. (4728)

Yarns B5

BULK YARN PRODUCTION. E. I. du Pont de Nemours & Co. BP 864 695, Apr. 6, 1961.
Polymer strands are fibrillated by subjecting them to the action of a highly turbulent fluid stream. (4729)

APPARATUS FOR MANUFACTURE OF NOVELTY CORE YARN. Moulinage et Retorderie de Chavanoz. BP 868 562, May 17, 1961.
By means of an intermittent feed for the core yarn, the density of the covering yarn varies along the length of the product, resulting in a loopy appearance. (4730)

PRODUCTION OF BULKED ACRYLIC FIBER YARNS. W. C. Appleton and W. H. Michael (to Delaware Mills). BP 869 636, June 7, 1961.
Low shrinkage and high shrinkage fibers are combined into a single sliver, spun into yarn, and heated. (4731)

NOVELTY TEXTURED YARNS. R. S. Gilchrist and D. A. E. Mattingley (to Klinger Mfg. Co. Ltd). BP 869 993, June 7, 1961.
Yarns with different dye absorption characteristics are subjected to a texturing treatment, twisted together, and dyed, before or after knitting, to produce knit fabrics of mottled appearance. (4732)

HIGH BULK CELLULOSE ACETATE FILAMENTS. Celanese Corp. BP 870 280, June 14, 1961.
Filaments particularly suitable for use as stuffing or filling material are obtained by subjecting acetate tow to at least 2 successive crimping operations to impart a non-rectilinear configuration to the filaments. (4733)

NYLON HOSIERY YARN PACKAGE. NV Onderzoekingsinst. Research. BP 870 316, June 14, 1961.
The package is built up by a traversing stroke which is a fixed length of 60 to 80% of the package height and which moves uniformly along the axis of the spindle in a reciprocating manner. The package thus becomes longer than the traversing stroke and of a pineapple-like shape. (4734)

BONDING OF TERYLENE TIRE CORD TO RUBBER. E. Knowles and T. J. Meyrick (to Imp. Chem. Inds. Ltd). USP 2 990 313, June 27, 1961.
See abstr. 313/60 (Brit. Pat. 816 640). (4735)

PLASTIC CORED ROPE. R. L. Stanton (to Am. Mfg. Co.). USP 2 991 615, July 11, 1961.
The rope consists of strands of intertwisted filamentary material laid over a tubular core of deformable plastic. (4736)

JET FLUID NOZZLE FOR BULK YARNS. C. J. Cormier and R. D. Alarie (to Canadian Celanese Ltd). USP 2 995 801, Aug. 15, 1961. (4737)

COMPOSITE CRIMPED ACRYLIC FILAMENTS. J. F. Ryan, Jr. and R. L. Tichenor (to E. I. du Pont de Nemours & Co.). USP 2 988 420, June 13, 1961.
Composite filaments with a low degree of crimp and a high degree of crimp reversibility are produced by simultaneously wet spinning 2 fiber-forming compositions possessing differential shrinkage. (4738)

PRODUCTION OF TWIST LIVELY SYNTHETIC YARNS. B. van den Bergh and C. J. Stadig (to Am. Enka Corp.). USP 2 993 333, July 25, 1961.
Twist lively yarn characterized by ease of knitting without twist suppression is obtained by continuously and successively drawing, heating, cooling, and ring twisting succeeding lengths of a monofilament and then greatly increasing the twist. (4739)

BULK YARN APPARATUS. C. L. Loveland and P. J. Thomas (to E. I. du Pont de Nemours & Co.). USP 2 994 938, Aug. 8, 1961.
Apparatus utilizing turbulent fluid technique for producing a bulk yarn composed of individually crimped filaments which is particularly useful for the treatment of glass yarns or for the production of composite yarn products. (4740)

PRODUCTION OF KINKED SYNTHETIC FIBER CARPET YARN. C. W. Brown, W. H. Crowder, and E. C. Broach (to West Point Mfg. Co.). USP 2 995 802, Aug. 15, 1961.
The process consists in twisting the yarn, skeining, shaking the yarn skeins in an oscillating fashion to facilitate yarn relaxation and kinking, heat setting, stretching the heat set yarn, and winding onto bobbins. (4741)

FABRIC PRODUCTION C

BRAKING MEANS FOR BRAIDING MACHINE BOBBIN CARRIER. S. Woods and C. E. G. Turner (to BTR Inds. Ltd). USP 2 988 300, June 13, 1961. (4742)

Warping, slashing, yarn preparation C1

WARP BEAM WINDING MILLS. T. Fletcher (England). BP 869 880, June 7, 1961. (4743)

NONSLIP KNOT OF MINIMUM SIZE. J. Norton (to Leesona Holt Ltd). BP 870 206, June 14, 1961.
Each yarn end forms a closed loop around the other yarn end and its tail is located between the two loops. The knot produced does not exceed 3 yarn diameters. (4744)

APPARATUS FOR APPLYING LIQUID LUBRICANT TO YARN DURING WINDING. E. Brierley and A. H. Norris (to Leesona Holt Ltd). BP 870 628, June 14, 1961. (4745)

MEANS FOR REGULATING SQUEEZE ROLL NIPPING PRESSURE IN SIZING MACHINES. H. Kabelitz (to Gebrüder Sucker GmbH). USP 2 992 626, July 18, 1961. (4746)

APPARATUS FOR HANDLING MULTIPLE WARP BEAMS. T. P. Matthews (to U.S. Rubber Co.). USP 2 994 939, Aug. 8, 1961. (4747)

MULTIPLE YARN WINDING MACHINES. W. Reiners (Germany). BP 870 857, June 21, 1961.
In a machine having multiple winding stations each with its own takeup spool and supply bobbin, there is provided a single replenishing mechanism and a single knot-tying mechanism and a mechanism for producing relative movement of these mechanisms and the winding stations. (4748)

SIZING COMPOSITIONS FOR ACETATE AND POLYESTER YARNS. H. W. Coover, Jr. and D. J. Shields (to Eastman Kodak Co.). USP 2 992 943, July 18, 1961.
The sodium salt of the copolymer of 9 parts by weight of N-isopropyl acrylamide and 1 part by weight of acrylic acid. (4749)

YARN-END DETECTION DEVICE FOR WINDING MACHINES. S. A. Spunt. USP 2 993 258, July 25, 1961.
The yarn-end is marked with an invisible dye, e.g. radioactive, fluorescent, infrared or UV dye, and an appropriate sensing device which moves in a direction parallel to the core of the wound package is provided. (4750)

WARP BEAMING APPARATUS. B. R. Friend and E. P. Nichols (to Mystik Adhesive Prods.). USP 2 993 259, July 25, 1961.
Power apparatus for applying a tape across the warp at the cut ends to maintain the strand pattern. (4751)

MEANS FOR UNWINDING YARN FROM COPS. E. Weber (to W. Schlafhorst & Co.). USP 2 994 491, Aug. 1, 1961.
In order to control fluctuations in tension and loop formation during unwinding, the width of the balloon formed is limited on the entire periphery about the axis of the yarn coil. (4752)

REPLENISHING MECHANISM FOR BOBBIN WINDING MACHINE. W. Siegenthaler (to Maschinenfabrik Scharer). USP 2 994 999, Aug. 8, 1961. (4753)

YARN TENSIONING DEVICE FOR CREELS. D. G. Burnell (to James Lees & Sons Co.). USP 2 995 316, Aug. 8, 1961. (4754)

CONE LOADING MECHANISM FOR YARN CONDITIONER. W. Brown (to Paramount Textile Machy. Co.). USP 2 996 200, Aug. 15, 1961. (4755)

Weaving C2

BOBBIN CLAMPING DEVICES FOR SHUTTLES. A. Fink (Switzerland). BP 870 256, June 14, 1961. (4756)

PLASTIC LAGS FOR DOBBY LOOMS. Fratelli Balduini. BP 870 284, June 14, 1961.
See abstr. 4690/60. (4757)

HEDDLE. R. M. Stephens (to Dan River Mills). USP 2 991 810, July 11, 1961.
The heddles are narrow, thin spring steel strips with widened portions at the center and each end. The widened end portions have C-shaped heddle bar eyes and the center portion is provided with a warp eye and an eye adapted for use with a drawing-in machine. (4758)

WEFT SEPARATOR ATTACHMENT FOR MULTIPLE SHUTTLE BOX LOOMS. O. D. McDearis. USP 2 991 811, July 11, 1961. (4759)

INDUCTION MOTORS FOR SHUTTLE PROPULSION. E. R. Laithwaite (to Nat. Research Develop. Corp.). USP 2 993 130, July 18, 1961. (4760)

WIRE SLIDE FOR CARPET LOOMS. H. M. Stanton (to Mohasco Inds.). USP 2 993 515, July 25, 1961. (4761)

PICKER STICK CHECK STRAP AND CHECK STRAP SUPPORT. O. L. Carter (to Slip-Not Belting Corp.). USP 2 995 152 and 2 995 153, Aug. 8, 1961.
The strap is formed of an endless belt, the center portion of which is joined to form a plied construction while the end portions remain separated to form loops (2 995 152). A spaced pair of ears is provided at each end of a bracket for carrying the pin about which the looped portion of the check strap is positioned (2 995 153). (4762)

Knitting C3

FLAT BED WARP KNITTING MACHINE. Wirkmaschinenfabrik Wilhelm Barfuss GmbH. BP 869 739, June 7, 1961.
The detachable guides on the pattern guide bars are secured to the top of the guide bars to facilitate replacement. (4763)

HAND FLAT KNITTING MACHINE. K. Steinhof (Germany). BP 870 260, June 14, 1961.
Machine in which the yarn can be inserted either by hand into all the advanced needles before the lock movement or can be automatically inserted and withdrawn by means of a thread guide simultaneously with the lock movement. (4764)

STOP MOTION FOR TWO-CYLINDER CIRCULAR KNITTING MACHINES. V. Hanzl and J. Maler (to Sdruzeni Podniku Textilniho Strojirenstvi). BP 870 690, June 14, 1961. (4765)

CIRCULAR HOSIERY MACHINE. G. Stibbe & Co. Ltd. BP 870 724, June 21, 1961.
Mechanism for converting a two-feed to a three-feed machine capable of splicing at two feeds. (4766)

PHOTOELECTRIC FAULT DETECTOR FOR STRAIGHT-BAR AND FLAT KNITTING MACHINES. C. O. Meiners, W. B. Lessing, and H. W. Lessing (to Meiners Optical Devices Ltd). USP 2 991 639, July 11, 1961.
The device consists of a series of scanning heads which are traversed across the fabric and which operate a stop motion as a result of variation in the degree to which it is illuminated. (4767)

CLUTCH MECHANISM FOR FULL-FASHIONED HOSIERY MACHINES. H. E. Haehnel (to Textile Mach. Works). USP 2 992 549, July 18, 1961.
Mechanism for disengaging or engaging the coulier mechanism from the main camshaft of the machine regardless of the speed of operation. (4768)

TWO-BED HAND-KNITTING APPARATUS. E. Erb (Switzerland). USP 2 993 352, July 25, 1961. (4769)

FIBER RECOVERY UNIT FOR SLIVER KNITTING MACHINE FOR THE PRODUCTION OF PILE FABRICS. S. M. Wheelock (to E. I. du Pont de Nemours & Co.). USP 2 993 351, July 25, 1961. (4770)

WARP KNIT PILE FABRICS. H. W. H. Grau (England). USP 2 993 353, July 25, 1961.
The fabrics are made by feeding a staple fiber web to the needles of a raschel knitting machine in conjunction with ground yarns so that the fibrous web becomes interknit with the ground yarns. See also abstr. 3935/60. (4771)

LADIES' HOSIERY. D. A. Wood, Jr., H. H. Pease, R. M. Matthews, and R. K. Smith (to Chadbourn Gotham, Inc.). USP 2 994 214, Aug. 1, 1961.
Hosiery with reduced streaking, improved sheerness, reduced snagging, and run-resistance are obtained by the use of held and floated stitches arranged throughout without interlooping. (4772)

CIRCULAR HOSIERY MACHINERY. N. Levin. USP 2 995 020, Aug. 8, 1961.
Method of initiating yarn feed to bare needles at the start of the selvage of a mock rib elastic top. (4773)

APPARATUS FOR AUTOMATICALLY SLITTING THERMOPLASTIC FABRICS ON FULL-FASHIONED MACHINES. T. S. Payne and T. L. Graves (to Burlington Inds.). USP 2 995 021, Aug. 8, 1961, and 2 995 912, Aug. 15, 1961. (4774)

WARP KNITTING MACHINE STOP MOTION. A. W. H. Porter (to Hobourn F. N. F. Ltd). USP 2 995 022, Aug. 8, 1961.
The stop motion consists of a row of hooked elements each supported by a single warp thread. Upon yarn breakage, the element comes into contact with an electrical conductor, closing a circuit and causing the machine to stop. (4775)

NEEDLE SELECTING DEVICE FOR CIRCULAR KNITTING MACHINES. N. Levin. USP 2 995 910, Aug. 15, 1961.
The needle selecting capacity of the machine is increased by associating a plurality of nonaligned pattern jacks with individual needles in such a way that each of the pattern jacks may be selectively controlled by a single set of cams which, in turn, may be selectively operated by a single trick wheel. (4776)

NEEDLE BAR ASSEMBLY FOR WARP KNITTING MACHINE. J. D. Wenrich (to Textile Mach. Works). USP 2 995 911, Aug. 15, 1961.
Needle bar mounting for reducing the overall weight of the needle bar assembly while overcoming misalignment of the various knitting elements caused by linear expansion. (4777)

SEAMLESS HOSIERY MACHINES. R. Peel (to Singer-Fidelity, Inc.). USP 2 995 913, Aug. 15, 1961.
The clinging of stockings to the discharge tubes in machines with pneumatic takeup is eliminated by ionizing the air within the discharge tube. (4778)

Fabrics C4

SLING NETS WOVEN FROM TWO-PLY NYLON CORD WEBBING. R. French (to Thomas French & Sons Ltd). BP 870 798, June 21, 1961. (4779)

MACHINES FOR FORMING TEXTILE FIBER PADS. A. E. Callaghan (to A. E. Callaghan & Son Ltd). BP 861 476, Feb. 22, 1961. Through BCIRA 41: 2299 (1961).
Loose fiber is carried in an air stream into a vibrating tray that has a vented cover at an adjustable height and, above the cover, a suction box. The fiber falls out of the air stream and builds up into a pad which the vibrations cause to move towards a delivery point. (4780)

PACKINGS AND BEARINGS. M. J. Wright and G. E. Taylor (to Small & Parkes Ltd). BP 861 506, Feb. 22, 1961. Through BCIRA 41: 2328 (1961).
The materials are made from yarn composed of polytetrafluorethylene yarns and yarns of asbestos, glass fibers, or cellulosic fibers. (4781)

FABRIC LINED RUBBER GLOVES, BOOTS, AND PROTECTIVE CLOTHING. L. Landau (England). BP 869 918, June 7, 1961.
The fabric is placed on a form, treated with a volatile hygroscopic substance, and dipped into an aqueous dispersion of synthetic rubber. (4782)

CUSHIONED TUFTED CARPETING. Bigelow-Sanford Carpet Co. BP 870 324, June 14, 1961.
In a backcoated tufted carpet, a pad of fibrous material is attached by needling the fibers from the pad through the backcoating and into the backing. The pad may be readily delaminated to permit taped or sewn seams between adjoining sections. (4783)

APPARATUS FOR REINFORCING FIBROUS FLEECES. A. Priller (to Forschungsinstitut für Textiltechnologie). BP 870 336, June 14, 1961.
Transverse threads are inserted between two layers of fleece by means of an endless belt rotating around the fleeces and carrying bobbins of the thread. (4784)

GLASS FIBER REINFORCED LAMINATE. Esso Research & Eng. Co. BP 870 715, June 21, 1961.
An organic silane ester bonding agent is mixed with the resinifiable diolefin polymer, e.g. butadiene and styrene, and applied to the glass fiber to form a laminate. This eliminates the operation of coating the fibers prior to lamination. (4785)

FABRICS FOR EIDERDOWN OR PILLOW COVERS. F. C. Kimmerling (to Courtaulds Ltd). BP 870 840, June 21, 1961. (4786)

CARPET TUFTING MACHINE. J. K. McCutchen. BP 871 006, June 21, 1961.
Mechanism for producing patterns by means of cut and uncut loops. (4787)

IMPARTING DUAL TWIST TO PILE CARPET YARN. C. C. Berry (to James Lees & Sons Co.). USP 2 986 867, June 6, 1961.
Method of variably twisting and backtwisting plied yarn to produce a more uniform, unstreaked random pile in Moresque type carpets. See also abstr. 817/61. (4788)

SUPPRESSING FABRIC YELLOWING. J. A. Hendley. USP 2 991 538, July 11, 1961.
Permanently blued white fabrics are produced by combining permanently dyed blue fibers with the undyed fibers so that after bleaching the dyed blue fibers neutralize any yellowness. (4789)

DEVICE FOR REMOVING STAINS FROM FABRICS BY DIGESTION. W. N. Bourland. USP 2 987 906, June 13, 1961. (4790)

BONDED GLASS FIBER THERMAL INSULATION. J. P. Stalego (to Owens-Corning Fiberglas Corp.). USP 2 990 307, June 27, 1961.
Binder composition for use in the manufacture of thermally stable glass fiber structures consists essentially of a phenol formaldehyde resin, a melamine formaldehyde resin, an alkyd resin, and a urea borate condensation reaction product. (4791)

FELT-LIKE WOVEN FABRICS. G. L. Moler and B. F. Adams, Jr. (to E. I. du Pont de Nemours & Co.). USP 2 991 536 and 2 991 537, July 11, 1961.
Fabrics having physical properties and appearance similar to felted wool fabric are obtained by multiple needling of woven and knit fabrics composed of at least 80% of staple fibers free from scales. (4792)

CARGO NETS. W. J. Higgins. USP 2 991 539, July 11, 1961.
The net is constructed of flat fabric strips provided at intervals with slots for the passage of intersecting strands. (4793)

WARP KNIT PILE CARPETS WITH MULTIPLE LAID-IN WEFT BIND. R. S. MacCaffray, Jr. (to C. H. Masland & Sons). USP 2 991 638 and 2 991 640, July 11, 1961. (4794)

AUTOMATIC MACHINE FOR PRODUCING TUFTED FABRICS. M. Newman. USP 2 991 737, July 11, 1961.
The machine is adjustable for forming high and low tufts and has means for automatically terminating operation when the yarn tension varies from predetermined limits. (4795)

PATTERN CONTROL MECHANISM FOR CARPET TUFTING MACHINE. R. E. Zenner, C. E. Williams, and M. E. Anderson (to C. H. Masland & Sons). USP 2 991 738, July 11, 1961.
Pattern control of each end passing from a creel to a needle is achieved by enlarging the feed loop and then diminishing it by means of latches subject to pattern control. (4796)

REWEAVING NEEDLE. E. V. Hughes. USP 2 991 809, July 11, 1961.
Needle for reweaving replacement threads in damaged fabrics. (4797)

REEL PACKAGE FOR DISPENSING BELTING, WEBBING, OR RIBBON WITH REMOVAL OF REEL. S. L. Eifrid. USP 2 991 958, July 11, 1961. (4798)

CORE-SPUN YARN REINFORCED VINYL PLASTIC BELTING. R. S. Goy (to Dunlop Rubber Co. Ltd). USP 2 992 150, July 11, 1961.
Core yarns formed by Belgian doubling and consisting of a core of continuous filament nylon or polyethylene terephthalate and a wrapping of cotton fibers are claimed. (4799)

CIGARETTE FILTERS OF CURLY INTERLOCKING BAST FIBERS AND FIBRILS. E. G. H. Mauthner, L. E. Baumann, and P. J. Clark (to Cigarette Components Ltd). USP 2 992 154, July 11, 1961. (4800)

WARP KNIT FISH NETS. H. F. Frith, Jr. (to Hagin Frith & Sons). USP 2 992 550, July 18, 1961.
Method of producing high tensile strength warp knit fish nets in which the knots will neither creep, break, or ravel. (4801)

WELDING NYLON AND SIMILAR SYNTHETIC FIBER FABRICS BY HIGH FREQUENCY ENERGY. S. Yamaguchi (Japan). USP 2 992 958, July 18, 1961.
The fabrics are welded by applying high frequency electric energy to at least 2 superimposed fabric layers moistened with either water or a mixture of water and glycerine. (4802)

WET BRUSHING TO IMPROVE THE APPEARANCE OF WOVEN ASBESTOS FABRIC. H. E. Sunbury (to U.S. Rubber Co.). USP 2 993 261, July 25, 1961. (4803)

ELECTRICALLY CONDUCTING TEXTRYLS. N. Blake (to E. I. du Pont de Nemours & Co.). USP 2 993 816, July 25, 1961. (4804)

NONWOVEN FABRIC LEATHER SUBSTITUTE. J. S. Proctor (to E. I. du Pont de Nemours & Co.). USP 2 994 617, Aug. 1, 1961.
Water-vapor permeable, scuff resistant, flexible leather substitute consisting of a base layer of a mat of nylon fibers bonded with polyvinyl chloride and a surface layer of a polyvinyl chloride film. (4805)

EXTENSIBLE, MULTILAYER GAUZE DIAPER. N. L. Seltzer (to Kendall Co.). USP 2 995 154, Aug. 8, 1961.
The diaper is woven of warp yarns having a twist multiple not exceeding 4.75 and of filling yarns having a twist multiple greater than 4.75 but less than 6.75. The filling yarns are disposed between the 2 exterior faces of the diaper body portion so that not more than 1/3 of the exterior faces are covered by the high twist filling yarns. (4806)

HEAT RESISTANT GLASS FABRIC. J. F. Moore (to Haveg Inds.). USP 2 995 803, Aug. 15, 1961.
The fabric is etched with hydrochloric acid at elevated temperature until the sodium carbonate soluble silica is 95 to 99% and then heat shrinking at 1700-2350° F until the fabric is dimensionally stable and the total silica is 95 to 99%. (4807)

GLASS FIBER MATS OF UNIFORM DENSITY AND THICKNESS. W. Schuller (England). USP 2 996 102, Aug. 15, 1961.
The glass fiber is conveyed by an air current, guided through distributor heads and laid down on a continuous, air-pervious traveling belt through which a suction force is applied. (4808)

ABRASIVE FABRICS. H. W. Hermance (to Bell Telephone Labs.). USP 2 996 368, Aug. 15, 1961.
Abrasive particles are deposited on the surface of pile fabrics in which the pile consists of thermoplastic fibers, and the fabric is heated to fuse the abrasive particles to the pile fibers. (4809)

FINISHING D

Chemical processes D1

OPTICAL BRIGHTENING TRIAZOLYL STILBENES. J. R. Geigy AG. BP 861 457, Feb. 22, 1961. Through BCIRA 41: 2357 (1961).
The claims are for a series of bis-4:5-naphthylene-1:2:3-triazolylstilbene sulfonic acids and their use as optical brightening agents. (4810)

RESIN TREATMENT OF TEXTILES. Shri Ram Inst. for Industrial Research. BP 861 693, Feb. 22, 1961. Through BCIRA 41: 2361 (1961).
The fabric is impregnated with a urea or melamine/formaldehyde precondensate, mangled to a takeup of 80-100%, and run through a fluid bed at 90-160° C. (4811)

APPARATUS FOR CONTINUOUS SOAKING OF RAW WOOL. S. G. Ekegren (to Separator AB). BP 867 451, May 10, 1961.
The fibers are maintained in a continuous state of agitation within the apparatus by injecting a jet of washing liquid below the liquid level and in the direction of the discharge opening of the apparatus. (4812)

WOOL FIBER FEEDING APPARATUS FOR SOLVENT SCOURING PLANTS. Commonwealth Scientific & Industrial Research Org. BP 869 793, June 7, 1961.
Apparatus for forming a uniform layer of wool fibers free of entanglement during the feeding of the fibers to a conveyor. (4813)

SPREADING MACHINES FOR COATING FABRICS WITH HIGHLY VISCOUS MATERIALS. F. T. Berry and W. Tidd (to Barrow Hepburn & Gale Ltd). BP 869 939, June 7, 1961. (4814)

WATERPROOFING AGENTS. R. L. Dalton (to E. I. du Pont de Nemours & Co.). BP 869 951, June 7, 1961.
Werner type aluminum complexes are claimed. (4815)

WATERPROOFING AGENTS. M. Kolker, A. E. Read, and J. David (to Catomance Ltd). BP 869 952, June 7, 1961.
An aqueous emulsion of wax containing a water-insoluble alkoxy, hydroxyalkoxy or acyloxy derivative of titanium or zirconium is claimed. (4816)

WATER REPELLENT EMULSIONS. Badische Anilin & Soda-Fabrik AG. BP 869 961, June 7, 1961.
Emulsions free of protective colloids and containing paraffin, waxes, oils, fats and/or resins and salts of weakly basic metals are stabilized by the addition of an alcohol containing not more than 5 carbon atoms. (4817)

CONVEYOR BELTS FOR CHLORITE BLEACHING. Kunstzijdespinnerij Nyma NV. BP 870 308 and 870 309, June 14, 1961.
Conveyor belts woven from polyalkylene yarns are claimed. (4818)

WATERPROOFING AGENTS. Petren Prods. Inc. BP 870 397, June 14, 1961.
Aqueous aluminum-potassium acetate solutions are claimed. (4819)

SPRAY DAMPING MACHINE. J. Johnson (to Hunt & Moscrop Ltd). BP 870 404, June 14, 1961.
Spray is applied to both sides of continuous fabric lengths while they are traveling in a vertical direction between spraying nozzles. (4820)

PERMANENT SHAPED FINISHES ON ACRYLIC FIBERS. Crylor. BP 870 701, June 14, 1961.
Permanent shaped finishes, e.g. pleated, crimped, calendered, embossed, are obtained by: (1) impregnating the fabric with a latent solvent for the fabric and a polymer which is soluble in the solvent; (2) heating at a temperature below that at which the fabric dissolves in the solvent; and (3) drying at a temperature equal to that at which the fabric dissolves in the solvent. (4821)

TWO STAGE CREASEPROOFING PROCESS FOR LINEN. F. C. Wood and R. E. Hunt (to Tootal Broadhurst Lee Co. Ltd). BP 871 105, June 21, 1961.
In the first stage the fabric is impregnated with urea and formaldehyde, heated to cause resin formation, and subjected to swelling or swelling and shrinkage. In the second stage the fabric is again impregnated and heated without being subjected to swelling or swelling and shrinkage. (4822)

FLAME RESISTANT CELLULOSE DERIVATIVES. Textile Research Inst. BP 873 555 and 873 556, July 26, 1961.
The cellulose material is treated with an organic sulfonyl chloride in the presence of a tertiary amine to effect preferential esterification of the hydroxyl of the primary alcohol group in the 6 position of the glucose anhydride unit. Then, at least a portion of the esterified groups are reacted with aqueous solutions of metallic halides to introduce a halogen into the molecule (873 555) together with phosphorus in the form of dialkyl phosphonyl groups (873 556). (4823)

GLASS FIBERS WITH IMPROVED TENSILE STRENGTH. A. W. Koon (to Columbian Rope Co.). USP 2 984 586, May 16, 1961.
Glass filaments are coated with 4,4'-bis-(p-hydroxyphenyl) pentanoic acid and dried. (4824)

CHEMICALLY MODIFIED WOOL. N. H. Koenig (to U. S. Secy. Agri.). USP 2 986 445, May 30, 1961.
Wool fibers with increased resistance to acids, oxidation, shrinkage, and yellowing are obtained by treating the wool in fiber, yarn, or fabric form with organic acid anhydrides in the presence of N,N-dimethylformamide. (4825)

ANTISTATIC AGENTS FOR SYNTHETIC FIBERS. H. Markert and H. Frotscher (to Bohme Fettchemie GmbH). USP 2 986 479, May 30, 1961.
Antistatic agents with high resistance to washing consist of water soluble precondensate of an aminotriazine, e.g. melamine, formaldehyde, and polyethylene oxide. (4826)

CREASEPROOFING COMPOSITION. N. H. Sherwood (to B. F. Goodrich Co.). USP 2 987 421, June 6, 1961.
Reduced amounts of urea and/or melamine formaldehyde resins can be used to effect creaseproofing without impairment of physical properties by incorporating in the composition an elastomeric polymer such as a polyacrylate or an internally plasticized vinyl chloride polymer. (4827)

OPTICAL BRIGHTENING AGENT. A. E. Siegrist, M. Duennenberger, and W. Grubenmann (to Ciba Ltd). USP 2 986 528, May 30, 1961.
A brightening agent having at least one 5-membered heterocyclic ring is fixed on a finely divided fiber-forming polymer, e.g. polyesters, polyamides, or polyacrylonitriles. (4828)

METHOD OF SETTING WOOLEN TEXTILES. H. P. Lundgren, N. H. Koenig, and C. E. Pardo, Jr. (to U.S. Secy. Agri.). USP 2 987 370, June 6, 1961.
Setting of creases and pleats in wool is effected by treatment with dimethyl sulfoxide in the presence of steam. (4829)

CREASEPROOFING LINEN. F. C. Wood (to Tootal Broadhurst Lee Co. Ltd). USP 2 988 416, June 13, 1961.
The linen is treated with a urea formaldehyde precondensate, heated to cure the resin, mercerized, and treated again with the resin. (4830)

CREASEPROOFING CELLULOSIC FABRICS WITH THIODIGLYCOL ESTERS AND ETHERS. W. D. Emmons and W. S. Wadsworth, Jr. (to Rohm & Haas Co.). USP 2 988 417, June 13, 1961. (4831)

MODIFIED NYLON FIBERS WITH IMPROVED ANTISTATIC PROPERTIES. K. Goldann (to Bohme Fettchemie GmbH). USP 2 989 364, June 20, 1961.
Nylon in the form of fiber or fabric is alkylated in the presence of sodium hydroxide with lactones, sultones, or lactams. (4832)

METHOD FOR SETTING KERATINOUS FIBERS. H. H. Beacham and I. M. Panik (to Nat. Lead Co.). USP 2 989 365, June 20, 1961.
Although the process relates primarily to hair treatment, it can be used for pleat setting in wool fabrics by imparting the desired configuration and treating with an aminoalcohol titanate or zirconate. (4833)

APPARATUS FOR COATING GLASS FIBER BLANKETS WITH VISCOUS SLURRY. C. H. Helbing (to Pittsburgh Plate Glass Co.). USP 2 989 422, June 20, 1961. (4834)

VINYL RESIN COATED BOOK COVER FABRIC. A. B. Malmquist and R. J. Mayfield, Jr. (to E. I. du Pont de Nemours & Co.). USP 2 989 423, June 20, 1961. (4835)

FLAME RESISTANT CELLULOSE DERIVATIVES. E. Pacsu and R. F. Schwenker, Jr. (to Textile Research Inst.). USP 2 990 232 and 2 990 233, June 27, 1961.
The afterglow in cellulosic fabrics on burning or charring is eliminated by pretreatment with an organic sulfonyl chloride and subjecting the resultant mesylated fabric to limited phosphorylation with diethyl phosphorus chloride (2 990 233) or halogenation with a metal halide (2 990 232). (4836)

PIGMENT DELUSTERED CELLULOSE ACETATE YARN. H. W. Bartholomay (to E. I. du Pont de Nemours & Co.). USP 2 990 291, June 27, 1961.
Delustered acetate fibers and yarns of reduced abrasiveness are obtained by the addition of titanium dioxide particles to the spinning solution. (4837)

WASHFAST TEXTILE FINISHES. J. A. Moyse and G. Williams (to Imp. Chem. Inds. Ltd). USP 2 990 298, June 27, 1961.
Finishes resistant to washing are obtained by simultaneously or successively treating fabrics with a water sensitive finishing agent and a mono- or dihalogeno-1:3:5-triazine. (4838)

ANTISTATIC AGENT. L. J. Novak (to Commonwealth Eng. Co.). USP 2 990 299, June 27, 1961.
The use of aqueous solutions of carboxyalkylated derivatives of dextran is claimed. (4839)

WATER AND FLAMEPROOFING NONWOVEN CELLULOSE FABRICS AFTER DYEING. K. Rosenlind (to Kimberly-Clark Corp.). USP 2 991 143, July 4, 1961.
The fabrics are treated in one bath with tannic acid and a basic dye and then treated in a second bath containing ammonium sulfamate as the flameproofing agent, a water repellent consisting of a wax and aluminum salt emulsion, and aluminum formate or acetate to inhibit the formation of a precipitate. (4840)

CREASE RESISTANT CELLULOSE FABRIC. R. S. Babiarz and A. D. Hicks. USP 2 991 146, July 4, 1961.
Crease resistant fabrics with other improved properties (e.g. mildew, flame, and water resistance) are obtained by reacting the fabrics with orthophosphoric acid and urea to form a cellulose-acid-nitrogen complex, introducing a metallic salt into the complex, and further treating the material to form an insoluble compound of the salt in situ. (4841)

SHRINKPROOF AND CREASEPROOF CELLULOSE TEXTILES. O. C. Bacon (to E. I. du Pont de Nemours & Co.). USP 2 992 138, July 11, 1961.
Dimensionally stable, crease resistant cellulose fabrics with unimpaired tensile strength and resistance to chlorine retention and yellowing are obtained by treatment with dimethylolethyleneurea in the presence of a catalyst consisting of a mixture of zinc nitrate and an alkali metal acetate. (4842)

AFTERGLOW RESISTANT CELLULOSE FABRICS. R. R. Dreisbach and J. L. Lang (to Dow Chem. Co.). USP 2 992 942, July 18, 1961.
The tendency to afterglow is substantially reduced by impregnation with polyvinylpyridine and phosphoric acid followed by a rinse with a dilute aqueous alkaline solution to neutralize any acidity. (4843)

SHRINKPROOFING WOOL. C. H. Binkley (to U.S. Secy. Agri.). USP 2 992 944, July 18, 1961.
The wool is impregnated with a composition containing a polyepoxide, a polyamide, and a glycerol-adipic acid polyester and the impregnated wool is heated to cure and insolubilize the composition. (4844)

TREATMENT OF THPC FLAME RESISTANT CELLULOSE FABRICS TO IMPROVE THEIR TEAR STRENGTH. T. D. Miles, F. A. Hoffman, and A. C. Delasanta (to U.S. Secy. Army). USP 2 993 746, July 25, 1961.
Fabrics rendered flame resistant with tetrakishydroxymethyl phosphonium chloride and methylol melamine resin are treated with a dilute solution of a strong mineral acid until partial hydrolysis results. (4845)

BLEACHING AGENTS. R. R. Dorsett (to Mangels, Herold Co.). USP 2 993 745, July 25, 1961.
The composition contains as its active ingredient trichlorocyanuric or dichlorocyanuric acid and includes as a degradation inhibiting agent an alkali metal molecularly dehydrated phosphate. (4846)

CHEMICALLY MODIFIED WOOL. N. H. Koenig (to U.S. Secy. Agri.). USP 2 993 748, July 25, 1961.
Chemically modified fibers with improved properties, e.g. resistance to shrinkage, acids, yellowing, water, microorganisms, result from reacting wool under essentially anhydrous conditions with an acid chloride in the presence of dimethylformamide. (4847)

COATING SUBSTRATES WITH POLYURETHANE FOAM. W. Tischbein (to Farbenfabriken Bayer AG and Mobay Chem. Co.). USP 2 993 813, July 25, 1961.
Yarns, ribbons, wires, and fabrics with a uniform coating of urethane foam are obtained by applying a mixture of a polyhydroxy compound, water, and a polyisocyanate and heating to form the foam in situ. (4848)

CONTROLLING MANGANESE ION IMPURITIES IN PERMONOSULFATE BLEACHING. G. L. Taylor (to E. I. du Pont de Nemours & Co.). USP 2 996 350, Aug. 15, 1961.
To avoid discoloration due to water containing manganese ions, sodium borate perhydrate is added to reduce the manganese ions to a colorless state. (4849)

Dyeing and printing D2

DISCHARGE PRINTS ON POLYESTER FIBERS. Farbwerke Hoechst AG. BP 859 015, Jan. 18, 1961. Through BCIRA 41: 2183 (1961).
Pastes containing a zinc formaldehyde-sulfoxylate reducing agent and anthraquinone are claimed. (4850)

BROWN PRINTS ON CELLULOSE WITH ACEDIANTHRONE. Ciba Ltd. BP 859 256, Jan. 18, 1961. Summary in BCIRA 41: 2182 (1961). (4851)

DYEING WITH METALIZED DYES. J. G. Kennedy and G. S. Roberts (to Whiffen & Sons Ltd). BP 859 279, Jan. 18, 1961. Through BCIRA 41: 2177 (1961).
Dyeings with metal/dye complexes on cellulosic, wool, or synthetic fibers are brightened by treatment with an aqueous solution of a sequestering agent such as ethylenediamine-tetra-acetic acid. (4852)

DYEING CELLULOSE ACETATE OR NYLON. H. C. Olpin, W. J. Savory, S. Taylor, and C. H. Kirkham (to Brit. Celanese Ltd). BP 859 409, Jan. 25, 1961. Through BCIRA 41: 2179 (1961).
Metal complexes of non-sulfonated azo or azo-methine dyes are applied in an aqueous medium containing a swelling agent, e.g. alcohol + ammonium thiocyanate. (4853)

DYEING AND PRINTING POLYESTER FIBERS. Farbwerke Hoechst AG. BP 860 441, Feb. 8, 1961. Through BCIRA 41: 2181 (1961).
As carriers in the application of dispersed acetate dyes to polyester fibers, claims are made for lactones containing at least one lactone group and one or two aromatic nuclei, or hydroxy acids that form lactones during the dyeing process. (4854)

DYEING CELLULOSE TRIACETATE. H. C. Olpin and J. A. Bright (to Brit. Celanese Ltd). BP 859 685, Jan. 25, 1961. Through BCIRA 41: 2178 (1961).
Dyes and printing pastes for cellulose triacetate are made up with water and a swelling agent, e.g. diethylene glycol diacetate or triacetin. (4855)

SPIN DYEING NYLON. Sandoz Ltd. BP 860 628 Feb. 8, 1961. Through BCIRA 41: 2180 (1961).
Metal phthalocyanines containing 4-8 Cl atoms are condensed with mercaptans in the presence of an alkali hydroxide and an alcohol to give green pigments that dissolve in benzene and can be used to color polyamide melts to spin yellowish- to bluish-green filaments that are fast to light, washing, gas fumes, and bleaching. (4856)

HIGH TEMPERATURE DYEING MACHINERY. Svenska Textilmaskinfabriken AB. BP 861 035, Feb. 15, 1961. Through BCIRA 41: 2176 (1961).
The invention relates to the fixation of dyes that require temperatures above 100° C. The material is impregnated with the dye liquor and wound up on a roller within a superheated steam chamber, from which roller it is wound on to a second roller, also inside the chamber, the steam pressure and time being regulated to give a desired dye equilibrium in accordance with a thermodynamic calculation based on the moisture content of the material at 20° C and under no nip pressure. (4857)

REACTIVE PHTHALOCYANINE DYES FOR CELLULOSE FIBERS. Ciba Ltd. BP 866 513, Apr. 26, 1961.
Water-soluble phthalocyanine dyes containing at least one halo-1:3:5-triazine group and a reactive amino group are claimed. (4858)

ANTHRAQUINONE DYES FOR CELLULOSE FIBERS. Ciba Ltd. BP 867 571, May 10, 1961.
Water-soluble anthraquinone dyes containing a monohalogen triazine radical and at least 2 sulfonic acid groups are claimed. (4859)

DYEING SHAPED POLYESTER FIBERS WITH AZO DYES. Farbwerke Hoechst AG. BP 869 631, June 7, 1961.
The coupling agent claimed in BP 809 221 (see abstr. 2261/59) together with a primary aromatic amine is applied to polyethylene terephthalate above 100° C from an aqueous solution in the presence of an organic solvent, a solution-promoter for the coupling agent (e.g. partially hydrogenated naphthalene), an alkali metal salt of a sulfonated oleic acid, and a substance to lower the pH of the bath. The amine is subsequently diazotized and coupled. (4860)

DYEING POLYESTER FIBERS WITH AMINO AZO DYES. Badische Anilin & Soda-Fabrik AG. BP 870 677, June 14, 1961. (4861)

DYEING POLYESTER FIBERS. Farbwerke Hoechst AG. BP 870 680, June 14, 1961.
The fibers are dyed at 100 to 130° C with aqueous dispersions of quinophthalone dyes derived by condensing an aromatic ortho- or peri-dicarboxylic anhydride with a 2-methyl pyridine or quinoline. (4862)

COMPLEX METAL TRIAZINYL MONOAZO DYES FOR CELLULOSE. Ciba Ltd. BP 870 985, June 21, 1961. (4863)

DYEING PROCESS FOR CELLULOSE FIBERS. W. Black, J. F. Mawson, and S. M. Todd (to Imp. Chem. Inds. Ltd). BP 871 193, June 21, 1961.
Water-soluble acrylic polymers are claimed as dyestuff migration inhibiting additives. (4864)

DYEING POLYESTER OR POLYAMIDE TEXTILES. Farbenfabriken Bayer AG. BP 872 349, July 5, 1961.
Dyes obtained by the reaction of aminoanthraquinones with acetanthranils or by the reaction of acetylamino anthraquinones with anthranilic acids are claimed. (4865)

DYEING PROCESS FOR FURS. H. E. Nurston, L. Peters, and C. B. Stevens (England). BP 872 506, July 12, 1961.
The furs are immersed in a dyebath containing a water-insoluble organic compound and an aqueous dispersion of the dye, the solubility of the dye in the organic compound being greater than its solubility in water. (4866)

BINDING AGENT FOR FLOCK PRINTING. Farbenfabriken Bayer AG. BP 872 525, July 12, 1961. (4867)

FIXATIVE FOR PIGMENT PRINTING OR DYEING. Farbenfabriken Bayer AG. BP 872 526, July 12, 1961. (4868)

ANTHRAQUINONE DYES FOR POLYOLEFIN FIBERS. Aziende Colori Nazionali Affini Acna SpA. BP 872 882, July 12, 1961. (4869)

PRODUCING DIAZO DYEINGS ON POLYESTER AND ACETATE FIBERS. Farbwerke Hoechst AG. BP 872 948, July 12, 1961.
Water insoluble diazo dyes are produced on the fibers by coupling a diazonium compound of an aminoazo compound with an arylamide of 2:3-hydroxynaphthoic acid. (4870)

DYEING CELLULOSE. Ciba Ltd. BP 872 949, July 12, 1961.
Vat dyes containing at least one hydrophilic carboxylic or sulfonic acid group and a triazinyl amino compound with two labile chlorine atoms are converted to the leuco form with a reducing agent and reacted with cellulose in the presence of an alkali. (4871)

FIXING PIGMENTS ON FIBROUS MATERIAL. Farbwerke Hoechst AG. BP 873 318, July 19, 1961.
The fixative comprises an alkali-soluble resin condensate containing reactive carboxylic acid groups (obtained by interacting a polycarboxylic acid and a polyhydric alcohol) dissolved in an alkaline medium and a water soluble precondensate of melamine, phenol, or urea and an aldehyde. See also abstr. 3344/61. (4872)

PROCESS FOR DYEING ACRYLIC FIBERS. E. Matter, O. Albrecht, and A. Hiestand (to Ciba Ltd). USP 2 984 539, May 16, 1961.
In dyeing acrylic fibers with basic dyes a diquaternary ammonium compound is added to the dyebath as a retarding or leveling agent. (4873)

AZO DYEING OF OLEFIN AND VINYON FIBERS. W. Jurgeleit (to Vereinigte Glanzstoff Fabriken AG). USP 2 989 358, June 20, 1961. (4874)

DYEING PROCESS FOR ACRYLIC FIBERS. R. Rokohl, B. Hartmark, E. Ploetz, and D. Wegerle (to Badische Anilin & Soda-Fabrik AG). USP 2 986 444, May 30, 1961.
In dyeing acrylic fibers with basic dyes a quaternary ammonium compound is added to the dyebath as a retarding or leveling agent. (4875)

ICE COLOR PRINTING PASTE. H. Kleiner and H. Gutjahr (to Farbenfabriken Bayer AG). USP 2 989 359, June 20, 1961.
Diazotized aminoazo compounds, free from sulfonic and carboxylic acid groups, are combined with 2-alkylamino-4(5)-sulfobenzoic acids and an ice color coupling agent and developed by neutral steaming. (4876)

CONTINUOUS DYEING OF ACRYLIC FIBERS WITH ACID DYES. H. R. Mautner (to Gen. Aniline & Film Corp.). USP 2 989 360, June 20, 1961.
The process is applicable to acrylic fibers containing dye assistants which have been incorporated in the fibers during wet spinning. The materials are run through an aqueous solution containing a water-miscible acid dye and a high boiling organic solvent for the dye at 175-212° F for 20-90 sec followed by steaming at 212-225° F. (4877)

LEVELING AGENT FOR DYEING ACRYLIC FIBERS WITH CATIONIC DYES. W. Hees (to Farbenfabriken Bayer AG). USP 2 989 361, June 20, 1961.
Quaternary ammonium compounds containing a benzyl or halogenated benzyl radical and an alkyl radical of at least 8 C atoms are claimed. (4878)

TREATMENT OF POLYETHYLENE TEREPHTHALATE FIBERS FOR IMPROVED DYEABILITY. A. Hartmann, W. Happe, and G. Gatys (to Farbwerke Hoechst AG). USP 2 989 363, June 20, 1961.
Fibers or filaments are treated with addition products of ethers or tertiary amines with sulfur trioxide and/or halides of sulfur oxygen acids in the presence of inert solvents. (4879)

PRINTING PASTES WITH REDUCED DYE MIGRATION. H. C. Beasley (to Dow Corning Corp.). USP 2 990 230, June 27, 1961.
Prints with improved color values, more sharply defined prints, and reduced fabric penetration are obtained by the inclusion of an organosilicon compound in the printing paste. (4880)

WOOL DYEING. J. J. Sandilands and J. H. Gormley (to Organic Chem. Corp.). USP 2 991 144, July 4, 1961.
In obtaining fast blacks on wool fibers with monoazo mordant black dye (Color Index 14645) the time of treatment is reduced and less acetic acid used if sulfamic acid is incorporated in the dyebath. (4881)

DYE CARRIER FOR POLYESTER FIBERS. A. S. Teot (to Dow Chem. Co.). USP 2 991 145, July 4, 1961.
The effectiveness of phenylphenol as a dye carrier is enhanced and the pH required for its use is lowered by using it in conjunction with sodium dodecyldiphenyl oxide disulfonate (Dowfax 2A1). (4882)

OIL-IN-WATER PIGMENT PRINTING EMULSION RESISTANT TO WET ABRASION. L. Auer and L. I. Balassa (to J. R. Geigy AG). USP 2 991 260, July 4, 1961. (4883)

HYDRAZINE BORANE REDUCING AGENTS FOR VAT DYES. R. A. Fleming (to E. I. du Pont de Nemours & Co.). USP 2 992 061, July 11, 1961. (4884)

DYEING ACRYLIC AND POLYESTER FIBERS WITH SOLUBLE LEUCO ESTER SALTS. H. R. Mautner and D. I. Randall (to Gen. Aniline & Film Corp.). USP 2 992 062, July 11, 1961.
The addition of a water-soluble nonionic surface active agent containing a polyoxyalkylene chain and derived from a compound containing reactive hydrogen and of a water-soluble cationic quaternary ammonium compound to the dyebath is claimed. (4885)

DYEING SYNTHETIC FIBERS WITH WATER-INSOLUBLE REACTIVE DYES. H. R. Hadfield, W. P. Mills, and R. H. Ricketts (to Imp. Chem. Inds. Ltd). USP 2 992 063, July 11, 1961.
The fibers are treated with an amine, phenol, or a thiophenol before or after dyeing with the reactive dyes. (4886)

GAS FADING INHIBITOR. D. M. Musser (to Chicopee Mfg. Corp.). USP 2 992 064, July 11, 1961.
The gas fading of anthraquinone dyes on synthetic fibers is inhibited by contacting the dyed fibers with a solution containing a major portion of sodium ethylene diaminetetraacetic acid and a minor portion of diethanolamine and triethanolamine. (4887)

DYEING ASSISTANT FOR DYEING POLYESTER AND CELLULOSE TRIACETATE FIBERS WITH DISPERSE DYES. W. Hees and O. Schneider (to Farbenfabriken Bayer AG). USP 2 992 877, July 18, 1961.
Methyl esters of ortho, meta, and para-cresotic acids are claimed. (4888)

PRINTING PASTE FOR CELLULOSE ACETATE FIBERS. P. A. Studer (to Celanese Corp.). USP 2 992 878, July 18, 1961.
Improved colorfastness is achieved by the addition of 2 to 8% of α-phenyl ethanol to pastes containing disperse or basic dyes. (4889)

TWO-PHASE PRINTING WITH VAT AND SULFUR DYES. J. Conrad, A. Janson, H. Weller, A. Blum, and W. Kueppers (to Badische Anilin & Soda-Fabrik AG). USP 2 993 742, July 25, 1961.
See abstr. 5110/60 (BP 837 940). (4890)

TWO-PHASE PRINTING WITH VAT AND SULFUR DYESTUFFS. J. Conrad, A. Blum, and W. Kueppers (to Badische Anilin & Soda-Fabrik AG). USP 2 993 743, July 25, 1961.
See abstr. 3007/60 (BP 829 177). (4891)

AZO DYES FOR POLYESTER FIBERS. K. Weis and H. Kleiner (to Farbenfabriken Bayer AG). USP 2 993 886, July 25, 1961.
The dyes are obtained by coupling a diazo compound of the benzene series with a pyrazolone, both components being free of sulfonic and carboxylic acid groups but together containing one or two aromatically linked thiocyanate groups. (4892)

VAT PRINTING STEAMER. R. P. Higginbottom (Canada). USP 2 994 215, Aug. 1, 1961.
Apparatus for providing supplementary heat and moisture in a controlled manner to the steamer. (4893)

PRODUCTION OF AZO DYEINGS AND PRINTS ON CELLULOSE FIBERS. K. G. Kleb (to Farbenfabriken Bayer AG). USP 2 995 412, Aug. 8, 1961.
Dyes free of sulfonic acid and carboxylic groups are fixed on the fibers by treatment at 60-160° C with an acid-binding agent, e.g. sodium or potassium hydroxide, carbonate, or bicarbonate. (4894)

VAT DYE PRINTING PASTE FOR USE IN FLASH AGING PROCESS. A. F. Klein and A. Voorhees (to Am. Cyanamid Co.). USP 2 995 413, Aug. 8, 1961.
The composition consists of a gum and the reaction product obtained by heating a mixture of vat dye, water, sodium formaldehyde sulfoxylate, and urea, diethylene glycol, or glycerine. (4895)

Mechanical processes D3

FOUR-ROLL CALENDER. H. Burgtorf, E. Schwarz, J. H. Benecke, O. Benecke, and K. Mende. BP 856 454, Dec. 14, 1960. Through BCIRA 41: 1978 (1961).
In a four-roll calender for rubber, thermoplastics and laminates, the rollers are arranged in a Z-formation. (4896)

SHIPPING RACKS OR REELS FOR PILE FABRICS. T. P. Kessler. BP 857 195, Dec. 29, 1960. Summary in BCIRA 41: 1988 (1961). (4897)

PLEATING APPARATUS. M. Roussos. BP 857 405, Dec. 29, 1960. Through BCIRA 41: 1979 (1961).
The fabric (especially nylon) is saturated with nearly boiling water (200-205° F), faced with a moisture-absorbing sheet material (e.g. kraft paper), run while still hot through the pleating machine and then through pleat-setting rollers at 350-500° F. For cellulose acetate fabrics, ammonia is added to the water to make them still more limp. (4898)

COLOR EMBOSSING CALENDERS. P. Dornbusch (Germany). BP 858 923, Jan. 18, 1961. Through BCIRA 41: 2189 (1961).
The claims are for an embossing calender for fabrics or paper, comprising an embossing roll and a color (ink) basin and doctor blade supplying color direct to a screen roll having an elastically yielding jacket that presses against the embossing roll. (4899)

AUTOMATIC FOLDING MACHINES. W. B. G. Cran (to T. Broadbent & Sons Ltd). BP 859 425, Jan. 25, 1961. Through BCIRA 41: 2192 (1961).
The invention relates to means whereby, if an article outside the range of a laundry folding machine is inadvertently fed to the machine it will pass through unfolded and not injure the mechanism. The electric switches are controlled by photoelectric or air-jet means. (4900)

COMPRESSIVE SHRINKING OF TEXTILE FABRICS. B. E. Screeton (to Bradford Dyers' Assoc. Ltd). BP 860 885, Feb. 15, 1961. Through BCIRA 41: 2188 (1961).
The fabric is made to travel partly round a heated nip roller, and is thus preheated, before entering the feed nip between a heated roller (which may be the same roller) and the rubber sheet. Steam may be blown into the feed nip. (4901)

FABRIC GUIDING APPARATUS FOR USE IN MANUFACTURING MULTI-PLY WEBBING OR BELTING. W. W. Spooner and E. B. Hey (to Spooner Dryer & Eng. Co. Ltd). BP 869 893, June 7, 1961. (4902)

PATTERNED TONE-ON-TONE EFFECTS ON CELLULOSE TRIACETATE FABRICS. Celanese Corp. BP 872 544, July 12, 1961.
See abstr. 4742/60 (USP 2 954 269). (4903)

LOADING AND UNLOADING DEVICES FOR CALENDER ROLLERS. G. Harzendorf (to VEB Erste Maschinenfabrik). BP 873 902, Aug. 2, 1961.
Unloading is effected by hydraulic means and loading is effected by a mechanical device acting on the hydraulic device. (4904)

WIRE TEASEL MOUNTING FOR RAISING MACHINES. T. H. Gibson and J. N. C. Cummins (to Lumb, Walshaw & White Ltd). BP 873 991, Aug. 2, 1961. (4905)

PLEATING THERMOPLASTIC FIBER FABRICS. Chemstrand Corp. BP 875 575, Aug. 23, 1961.
See abstr. 2229/60 (USP 2 924 361). (4906)

WIRE CARD NAPPING MACHINE. N. Pilkington, J. M. D. Tomlinson, and R. R. Clegg (to Tomlinsons (Rochdale) Ltd). USP 2 989 795, June 27, 1961.
See abstr. 840/60 (BP 821 850). (4907)

ELECTROSTATIC FLOCKING MACHINE. K. Roberts and S. C. Peterson (to Intern. Industrial Developers, Inc.). USP 2 992 126, July 11, 1961. (4908)

Drying, setting, conditioning D4

CENTRIFUGAL EXTRACTOR FOR REMOVING WATER FROM COILS OF YARN. Scholl AG. BP 869 309, May 31, 1961. (4909)

DRYING APPARATUS FOR TRAVELING WEBS. E. A. Timson (England). BP 872 003 and 872 004, July 5, 1961.
In an apparatus utilizing a series of fluid fuel burners, means for controlling the amount of heat supplied by the burners in accordance with the speed of travel of the web. (4910)

FUME EXHAUST MEANS FOR WEB DRYING APPARATUS. E. A. Timson (England). BP 875 683, Aug. 23, 1961. (4911)

DRYING APPARATUS FOR TUBULAR KNIT FABRICS. Samcoe Holding Corp. BP 875 782, Aug. 23, 1961. (4912)

DIMENSIONALLY STABLE CYANOETHYLATED COTTON. W. G. Sloan, A. M. Du Pré, Jr., E. M. Buras, Jr., H. J. Janssen, and J. D. Tallant (to U.S. Secy. Agri.). USP 2 993 749, July 25, 1961.
Dimensionally stable partially cyanoethylated cotton fibers are produced by heating the chemically modified fibers at 100–235° C for 30 sec to 8 min while applying a tension equal to 1/3 to 1/2 of the breaking strength of the fibers. (4913)

HOSIERY SETTING APPARATUS. H. Richter (to Paramount Textile Machy. Co.). USP Reissue 25 019, Aug. 8, 1961. Original No. 2 856 108, Oct. 14, 1958.
See abstr. 4673/58. (4914)

TWIST YARN SETTING AND CONDITIONING MACHINE. W. Brown and C. R. Scheuring (to Paramount Textile Machy. Co.). USP 2 995 828, Aug. 15, 1961.
Machine for setting twist yarn by imparting a desired moisture content to yarn cones by subjecting them to a vacuum followed by steam treatment followed by a further vacuum. (4915)

TESTING AND MEASUREMENT E

Yarns E2

APPARATUS FOR DETECTING VARIATIONS IN SIZE OF FILAMENTARY MATERIAL. A. G. McKay and G. Syke (to Lastex Yarn & Lactron Thread Ltd). BP 861 225, Feb. 15, 1961. Through BCIRA 41: 2137 (1961).
Photoelectric system for scanning a running yarn or filament, and means for filtering the output of the sensitive element (preferably a photo-transistor) so that a signal is operated only when sudden, local variations in yarn diameter occur, outside a predetermined limit. (4916)

APPARATUS FOR TESTING LOOPED TYPE BULKED YARN UNIFORMITY. B. J. van Dongeren (to Am. Enka Corp.). USP 2 991 685, July 11, 1961. (4917)

Fabrics E3

TELEVISION DEVICE FOR INSPECTING MOVING LENGTHS OF FABRIC. P. Dornier (to Lindauer Dornier GmbH). USP 2 984 699, May 16, 1961. (4918)

COLORFASTNESS TESTING APPARATUS. H. Günther and J. Kern (Germany). USP 2 987 914, June 13, 1961. (4919)

MILL MANAGEMENT F

Plant and equipment F2

SUCTION APPARATUS FOR REMOVING LOOSE FIBERS FROM TEXTILE MACHINERY. R. H. Marshall (England). BP 869 960, June 7, 1961. (4920)

DEVICE FOR CLEANING TEXTILE MACHINE ROLLERS. F. Reiterer and L. Windisch (France). BP 872 939, July 12, 1961.
In rolls having rubbing devices associated with a suction system for the removal of waste accumulated on the rubbers, means for automatically removing the rubber from the corresponding roll at predetermined intervals. (4921)

TRAVELING BLOWER CLEANER FOR TEXTILE MACHINERY. G. W. Allred (to Bahnson Co.). USP 2 994 904, Aug. 8, 1961.
Blower unit in which a stream of high velocity air can be directed to cover a spherical path. (4922)

11

TEXTILE *Technology* DIGEST

CONTENTS

Fibers	Abstr.	4923 - 4953
Yarn Production		4954 - 5005
Fabric Production		5006 - 5075
Finishing		5076 - 5185
Testing and Measurement		5186 - 5224
Mill Management		5225 - 5237
Sciences		5238 - 5269
Miscellany		5270 - 5283
Patent Checklist		5284 - 5444
Author Index		Back Cover

NOVEMBER 1961

INSTITUTE OF TEXTILE TECHNOLOGY
CHARLOTTESVILLE, VIRGINIA

OFFICERS

J. L. LANIER, V. Chairman
L. H. HANCE, Pres.

ROGER MILLIKEN, Chairman

C. H. MERRIMAN, JR., Sec.
PERCY S. HOWE, JR., Treas.

TRUSTEES

T. M. BANCROFT, Pres.
Mount Vernon Mills, Inc.
W. N. BANKS, Pres.
Habersham Mills
WELSFORD BISHOPRIC, Pres.
Spray Cotton Mills
FULLER E. CALLAWAY, JR., Chm.
Callaway Mills Co. Board
J. A. CHAPMAN, JR., V. Pres.
Inman Mills
JOHN B. CLARK, Pres.
Coats & Clark, Inc.
STANLEY W. CONVERSE, Pres. &
Clifton Manufacturing Co. Treas.
EUGENE CROSS, JR., Pres.
Cross Cotton Mills Company
C. M. DAVIS, Sr. V. Pres.
Golden Belt Manufacturing Co.
FREDERICK B. DENT, Pres.
Mayfair Mills
L. H. HANCE, Pres.
Institute of Textile Technology

WAYNE J. HOLMAN, JR., Chm.
Chicopee Mfg. Corp. Board
PERCY S. HOWE, JR., Chm. Board
The American Thread Co., Inc.
J. L. LANIER, Pres.
West Point Manufacturing Co.
C. H. MERRIMAN, JR., Ex. V. Pres.
Crompton-Shenandoah Co.
ROGER MILLIKEN, Pres.
Deering Milliken, Inc.
W. S. MONTGOMERY, Pres.
Spartan Mills
RUSSELL B. NEWTON, Pres.
Deering Milliken Research Corp.
J. J. NORTON, JR., V. Pres. & Treas.
Pacolet Manufacturing Co.
GORDON OSBORNE, Pres.
Warwick Mills
CARY L. PAGE, Pres. & Treas.
Jackson Mills

ERNEST REES, JR., Pres.
The Elk Cotton Mills
WALTER REGNERY, V. Pres.
Joanna Cotton Mills Co.
W. E. REID, Pres.
Riegel Textile Corp.
C. H. REYNOLDS, V. Pres.
Spindale Mills, Inc.
JOHN F. SCHENCK, III, Pres.
Cleveland Mills Co.
A. ALEX SHUFORD, JR., Pres.
Shuford Mills, Inc.
SEABURY STANTON, Pres.
Berkshire Hathaway Inc.
LEE TILLERY, V. Pres. Opns.
West Point Manufacturing Co.
R. M. VANCE, Pres.
Clinton Cotton Mills
H. W. WHITCOMB, Pres.
Fieldcrest Mills, Inc.
ALBERT S. WILSON, JR., Pres.
Aberfoyle Manufacturing Co.

TECHNICAL ADVISORY COMMITTEE

P. H. BURRUS, JR.
Jackson Mills
P. N. COLLIER
Callaway Mills Co.
EUGENE CROSS, III
Cross Cotton Mills Co.
HARRY L. DEFORE
Deering Milliken Service Corp.
T. C. DREW
Spartan Mills
CHARLES FORNEY
Cleveland Mills Co.
G. T. GARDNER
Riegel Textile Corp.
J. D. GREEN
P. H. Hanes Knitting Co.
JOHN K. HOUSTON
Spray Cotton Mills
DAVID E. HOWE
The American Thread Co., Inc.

M. EARL HEARD, Chairman
West Point Manufacturing Co.

WILLIS E. JOHNSON, JR.
Mount Vernon Mills, Inc.
HEATH O. KENNETTE
Chicopee Manufacturing Corp.
JULES J. LOVE
Mayfair Mills
W. W. McLEOD
Coats & Clark, Inc.
SAM C. MAYNE
Acco Fiber & Spinning Lab.
ROGER MILLIKEN
Deering Milliken, Inc.
HENRY G. MORRELL
Cherokee Textile Mills
H. A. PICKFORD
Crompton-Highland Mills, Inc.
W. H. POTTER
Berkshire Hathaway Inc.
E. L. RAMEY
Inman Mills

ERNEST REES, JR.
The Elk Cotton Mills
WALTER REGNERY
Joanna Cotton Mills Co.
W. A. RHINEHARDT
Golden Belt Manufacturing Co.
T. I. STAFFORD
Clifton Manufacturing Co.
M. W. STRIBLING
Habersham Mills
J. B. TEMPLETON
Clinton Cotton Mills
R. H. TUTTLE
Fieldcrest Mills, Inc.
E. W. WEITZEL
Shuford Mills, Inc.
L. A. WHITE
Spindale Mills, Inc.
H. D. WHITENER
Aberfoyle Manufacturing Co.

The **TEXTILE TECHNOLOGY DIGEST** is published monthly by the Library of the Institute of Textile Technology to provide abstract coverage of current periodicals, books, papers, and patents in the field of textile technology. The library is always willing to help Institute members and TEXTILE TECHNOLOGY DIGEST subscribers to obtain the full text of abstracted references. In preparing these abstracts the library tries to report correctly the contents of the original papers. Printed in Crozet, Virginia, by Acme Visible Records, Inc. Annual subscription price: $25.00.

Leaf, G. A. V., 5034
Leeson & Holt Ltd, P5339
Lemin, D. R., P5425
Leonard, E. K., 5129
Lepenye, G., 5211
Lepetkova, M. K., 5138
Leveau, M., 5195, 5263
Lewis, G. M., 5188
Lewis, G. W., P5437
Liba Maschinenfabrik GmbH, 5040
Liedl (F.) AG, 5172
Lindell, S.-E., 5269
Lipscomb, R., P5294
Liss, R. L., 5210
Little, J. S., 4950
Littleton Street Woollen Spinners Ltd, P5327
Livingstone, F. C., 5029
Loden, H. D., 5271
Lord, W., P5384
Loughlin, J., 5280
Louis, G. L., 4963
Lucke, E., P5312
Lynch, J. W., 5078
McCance, H. B., P5406
Mack, C., 5238
Mack, C. H., 5097
McKelvey, J. B., 5098, 5118, 5131
Macklem, J. E., 5051
MacLeod, R. B., P5294
McMahon, G. B., 5183
McMillan, O. J., Jr., 5130
Mac Niece, E. H., 5225
McPhee, J. R., 5073
McPherson, D. B., 5150
McSherry, W. F., 5099
Mahlo, H., P5444
Malan, J. P., 5207
Malinskii, Y. M., 4949
Manich-Oliva, A., 5100
Mann, R. J., P5408
Mansfield, D. F. G., P5332
Maquinaria Textil del Norte de Espana SA, 5019
Marousek, G. E., 4932
Marsh, J. T., 5126
Martin, E. M., 5271
Marvel Specialty Co., P5367
Marzocca, A., 5146
Mayer (Karl) Erste Hessische Wirkmaschinenfabrik, P5377
Mayson, G. T., 5061
Mazingue, G., 4965, 5124, 5258
Meaburn, S., P5289
Meccanica del Nord, 5028
Mehltretter, C. L., 5117
Mehta, P. C., 5074
Mellies, R. L., 5117
Mel'nikov, B. N., 5154
Menschner (J.) Textilmaschinenfabrik, 5174
Meos, A. I., 4953
Merriman Bros., Inc., P5321
Messien, G., 4965, 5124
Meyer-Waespi & Cie AG, P5398
Michie, R. I. C., 5244
Mihalik, B., 5180
Miles, T. D., 5214
Milicevic, B., 5143
Mills, R. W., 5028
Mills, W. P., P5421
Minn. Mining & Mfg. Co., 5092
Mizell, L. R., 5088
Modi, J. R., 5074
Mogilevskii, E. M., 5001
Monfort, F., 4972
Monk (S. A.) Ltd, P5362
Monsanto Chem. Co., P5338, P5410
Montecatini Soc. Gen. L'Ind. Mineraria Chimica, P5330
Montfort (Knitting Mills) Ltd, P5371
Morley, T. K., P5368
Mortamet (J.) Etab., 5177
Moryganov, P. V., 5154
Moyse, J. A., P5393
Muller, H., 5115
Murav'eva, K. N., 4991
Nabar, G. M., 5157
Nagao, H., 4939
Nat. Inst. Drycleaning, 5105
Nechaeva, S. A., 4949
Needham, H., 4984
Newman, N., 5060
Newsome & Spedding Ltd, 5020, 5021
Nicely, D. C., 5068
Nitschke, G., 5200
Nopco Chem. Co., P5403
Norris, A. H., P5339
Norton (Sir Jas. Farmer) & Co. Ltd, 5179
Nutter, W., 4979
Okada, A., 4946
Ondrejka, J., 5103
O'Neill, W. A., P5285
Onikov, E. A., 5008
Ordway, C. B., 5145
Orlova, Z. M., 4982
Orr, R. S., 4924
Osborne, W. T., P5358
Ostermann, M., Jr., P5335
Ostermann, M., Sr., P5335
Owens-Corning Fiberglas Corp., P5284, P5331
Pacetti, S., 5251
Pajgrt, O., 5103
Pakshver, A. B., 5135
Palit, S. R., 5223
Parish, G. J., 5123
Parkin, W., 4984
Parsons, B. N., P5421, P5424, P5438
Patel, S. M., 5206
Patton, E. L., 5130
Pelle, B. J., 5164
Phillips, E. R., Jr., 5102
Piller, B., 5005
Pilpel, N., 5101
Planck, A., P5363
Platt Bros. Ltd, 4977, 4985, 4986, 4987
Poesgen (Gebr.) GmbH, 5147
Pollard, E. F., 5130
Ponomarev, V. K., 5217, 5219
Pool, W., P5325
Porter, A. W. H., P5360, P5361
Porter, I. S., 5022
Potapova, L. V., 5208
Prescott, L. A., 5171
Preston, R. D., 5243
Pretema Ltd, 5212
Prince-Smith & Stells Ltd, P5309
Proshkov, A. F., 4958
Ralph, J. T., 5271
Rattee, I. D., 5160, P5427
Raven, D. J., 4933
Redmann, J. J., 4924
Reed, C. Y., P5421
Rees, B. L., P5332
Reeves, W. A., 5097, 5129, 5130, 5274
Reichman, C., 4993, 5030, 5032
Reid, J. G., 5232
Reiners, W., P5341, P5343, P5344, P5345
Reisfeld, A., 5033
Renbourn, E. T., 5282
Reynolds, J. H., 5231
Rhodes, E., 4967
Rhodes, F. M., 5271
Richmond, A., P5325, P5326
Ridgway, F., P5314
Riding, G., 5004
Rieter (J. J.) & Cie AG, P5308
Rixon, W. E., 5121
Robbart, E., P5407
Roberts, C. P., 5080
Robins, R. H., P5342
Robinson, E. A., 5089, 5090, 5091
Robinson, J., 5089, 5090, 5091
Rodon, G. W., 5252
Rogovin, Z. A., 4949
Rosemann, W., 5201
Rosen, K. I. J., P5372
Roth, P. B., 5128
Rowat, D. L., 5109
Rowlett, J. H., P5366
Rubenstein, C., 4964
Rusoff, I. I., 5245
Rusznak, I., 5211
Rutherford, H. A., 5267
Sackner Prods., 4996
Salvin, V. S., 5079
Sands, J. E., 4963
Sanglas Casanovas, J. M., P5313
Sant'Andrea, 4980
Sarkar, A. K., P5401
Satlow, G., 5268
Sause, R., P5393
Scanlon, E. C., P5334
Schoenberg, K. A., 5215
Schoeneberg, W. A., 5079
Schröder, J. F., P5352
Schubert, G., 5192
Schürch, A., 5110
Scott, M. J., P5410
Scott & Williams, Inc., P5376
Scott Paper Co., 5054
Scowcroft, H., P5302
Scragg, F., P5295, P5305, P5318
Scragg (E.) & Sons Ltd, P5295, P5304, P5305, P5318
Seeligmüller, P., 5115
Seltzer, I., P5427
Sen Gupta, S. R., 5062
Senti, F. R., 5117
Sevost'yanov, A. G., 4976
Shashoua, V. E., 5254
Sherwood, P. W., 5058, 5069, 5230
Shilova, G. I., 5166
Shirota, T., 5156
Shishlo, K. S., 5234
Shri Ram Inst. Ind. Res., P5388
Shroff, G. G., 5157
Sieber, J. H., 5106
Singer-Fidelity, Inc., P5359, P5379
Singer Sewing Mach. Co., 5071
Singh, S. N., 5044
Slade, A., P5323
Sloan, F. R. W., P5399, P5406
Slobodian, J. T., 5109
Smith, R. W., 5271
Smith, W., 5271
Snowden, D. C., 5049
Soc. des Mecaniques Verdol, P5350
Soc. Macchine Industria Tessile, 5018
Soc. Rhodiaceta, P5380
Socitex, P5291, P5293
Solinger, J., 5046
Speakman, R. H., P5294
Spedding, H., 5189
Springell, P. H., 5264
Sreenivasachar, H. G., 5206
Staubli, H. H., P5348
Staubli, O., P5348
Staubli, R., P5348
Steele, R., 5274
Steele, W. R., 5081
Stephen, W. E., P5393
Stirling, J., P5434
Stockbridge, H. C. W., 5282
Straley, J. M., P5413
Strasheim, A., 5259
Strzhalkovskaya, V. V., 5009
Subramanian, T. A., 5206
Suchecki, S. M., 5168
Suda, Y., 5156
Suleimanova, Z. I., 5002
Sulzer Frères SA, P5347, P5356
Sustmann, C., 5199, 5202
Sutcliffe, E. G., 5132
Svenska Oljeslageri AB, P5383
Swan, J. M., 5257
Swatek, W. T., 5096
Sweetten, R. B., 4990
Swift Spinning Mills, 4973, 4974
Symes, W. S., 5003
Symonds, W. E., 5037
T. M. M. (Res.) Ltd, P5302, P5355
Takase, Y., 5134
Tanford, C., 5255
Tappi Drying Comm., 5181
Tattersall & Holdsworth, 5006
Taylor, G. W., P5285
Tensora Erzeugnisse Konservierungsverfahren, P5402
Terrot (C.) Sohne, 5031
Tester, A., P5371
Thermacrome Ltd, 5176
Thermo-Chem Corp., 5064
Thorsen, W. J., 5187
T'I-Ch'eng, C., 4992
Tomlinson, N., P5442
Tousignant, W. F., P5404
Travers, J. J., 5216
Trávnicek, Z., 5005
Tunstall, N. J., P5326
Tusveld, H., 5148
Ueno, S., 4994
Ulrich, P., 5163
Unger, J., 4960
United Insulator Co. Ltd, P5342
U. S. Secy. Agri., P5411
Universal Maschinenfabrik GmbH, P5357
Upadhyay, P. B., 5074
Urlaub, G. A., P5364
Usenko, V. A., 4991
VEB Tullmaschinenbau, P5328
van der Torn, R., 5272
van Overbeke, M., 4965, 5124, 5258
van Wees (J. A. F.) Machinefabriek, 5175
Vasil'eva, T. M., 5085
Vaswani, T. B., 5013
Veneklasen, P., 5187
Vinson, L. J., 5216
Visapää, A., 5242
Voitelev, Y. A., 4944
Volf, L. A., 4953
von Hornuff, G., 5087
Vostroknutov, S. P., 5017
Waack, R., 5253
Wagner, R. E., 5078
Wainwright, C. H., P5370
Walkden, Makin & Co. Ltd, P5442
Walker, I. K., 5261
Walker & Smith, Batley, Ltd, P5288
Wallace, D. J., P5413
Walsco Co., 5066
Walworth, C. B., 4941
Ward, C. V., P5300
Wasiak, B., 5241
Waters, E., P5424, P5438
Watson, T., P5390
Watt, I. C., 4931
Webre, B. G., 5098, 5131
Wegener, W., 5201
Weidinger, A., 5240
Weimann, C., 5113
Weiss, L. C., 4924
Welch, C. L., 5271
Welch, C. M., P5411
Welker, P., 5050
Westbrook, W., 5014, 5228
Whewell, C. S., 5185
White, H., 5025
Whitfield, F. L., P5374
Whitin Mach. Works, 4970, 4978, 4988
Whitinsville Spinning Ring Co., 4989
Wibaux, G., 5258
Wignall, H., 5024
Wilbur, J. C., 5045
Wildman, A. B., 5190
Wille, R., P5353
Winczakiewicz, A., 5241
Woodside, L. M., 5070
Wray, G. H., 4999
Wright, F., P5309
Wullimann, M., P5369
Würz, A., 5144
Wyld, A. H., P5427
Wynne-Owen, W., 5000
Yamadera, R., 5265
Yates, S. D., P5298
Yeates, T. E., 5117
Young, E., 5045
Zahn, H., 5197
Zalkind, B., 4983
Zernov, E. V., 4951
Zhilinskii, T., 4945
Zollinger, H., 5139, 5153, 5159, 5162

AUTHOR INDEX

AATCC Comm. on Wash & Wear, 5209
Abbott, S. L., P5306
Abbott Mach. Co., P5306
Adams, C. S., P5317
Adams, D. A. W., P5401
Algie, J. E., 4931
Amemiya, H., 5266
Am. Carpet Inst., 5270
Am. Cyanamid Co., P5415
Am. Felt Co., 5052
Am. Inst. Elec. Engrs., Textile Ind. Comm., 5237
Amick, C. A., 5161
Anderson, G. C., 4954
Anderson, S. L., 5193
Androsov, V. F., 5077
Ant-Wuorinen, O., 5242
Arceneaux, R. L., 5127
Archibald, L. B., 5274
Armour & Co., P5405
Armstrong, A. A., Jr., 5267
Arnold, W. C., P5346
Arthur, J. C., Jr., 5099
Arundel Coulthard & Co. Ltd, P5314
Asboth, I., 5180
Asquith, R. S., 5260
Atmospheric Control Ltd, P5300
Australia Commonwealth Sci. & Ind. Res. Org., 5281
Averbukh, S. K., 5138
Badertscher, W., 5165
Badische Anilin- & Soda-Fabrik AG, P5423
Baier, H., 5082
Bajpai, L. S., 5185
Bakke, W. W., P5404
Bandyopadhyay, S. B., 5194
Barber, R. N., P5397
Barella, A., 4981
Barmer Maschinenfabrik AG, P5315
Barrow, Hepburn & Gale Ltd, P5394
Barry, J. C., 5214
Bassindale, I. B., P5355
Bayer, O., 5162
Bayer (Farbenfabriken) AG, P5418, P5436, P5440
Beck, H., P5320
Bellwood, L., 4959
Belov, M. F., 4968
Belyshev, P. V., 5278
Bendix Corp., P5316, P5319
Bene, C., P5443
Benerito, R. R., 5098, 5131
Benisek, L., 5198
Bennett, G. A., P5434
Benninger (Maschinenfabrik) AG, P5420
Benteler-Werke AG, 5086
Bentley Eng. Co. Ltd, P5370
Berard, W. N., 5129, 5130
Berls, R. J., P5405
Berni, R. J., 5131
Berriman, L. P., 4926
Berry, E. B., 5048
Berry, F. T., P5394
Berry, W. R., 5203
Bhattacharyya, D. N., 5062
Bianco, L. E., P5307
Biedawski, J., P5408
Bikerman, J. J., 5094
Bird & Yeomans Ltd, P5358
Birtwistle, A. C., P5416
Bitter, B., 5159
Blackshaw, H., 5133
Blake, W. R., 5271
Blankenburg, G., 5197
Bleachers Assoc. Ltd, P5399, P5406
Blicksilver, J., 5277
Blore, J., 5060
Bonas Bros. Ltd, P5346
Bond, N. J., P5297
Booth, J. E., 5186
Borsten, H., 5151
Bose, B. K., 5194
Bouhuys, A., 5269
Brach, J., 4972
Bradley, D. G., P5289
Braun-Ronsdorf, M., 5063
Brey, W., P5400
Brierley, E., P5339
Bright, R., 5136
Brightman, R., 5133
Briscoe, J. A., P5294
Brit. Celanese Ltd, P5325, P5326, P5408
Brit. Cotton Ind. Res. Assoc., P5389
Brit. Nylon Spinners Ltd, P5297, P5298, P5323, P5332, P5337
Brit. Tufting Machy. Ltd, 5075
Bromley, J. E., P5290
Brooksbank, R., P5288
Brown, J. C., 5213
Bruce, C. S., 4997
Bruley Freres & Estissac Etab., P5378
Brunnschweiler, E., 5221
Buijs, K., 5259
Burgess, S., 5189
Burlington Inds., P5365, P5375
Burnip, M. S., 4999
Burr, F. K., 5125
Butterfield, K. S., 4961
Bykov, A. N., 4938, 5239
Caillet, M., 5195, 5263
Callebaut de Blicquy Etab. SA, P5430
Capponi, M., 5137
Caress, A., 5275
Carrière, G., 5248
Carroll-Porczynski, C. Z., 4937
Carter, T., 4990
Cassella Farbwerke Mainkur AG, P5419
Chakraverti, I. B., 5062
Chatterley, R. J., P5354
Chem. Abstrs. Serv., 5279
Chemstrand Corp., 5149, P5290, P5292, P5329
Chi-Min, B., 4935
Chouteau, J., 5122
Chubb, A. A., P5295
Ciba Co., 5112
Ciba Ltd, P5412, P5422, P5426, P5429, P5433, P5435, P5441
Ciniglio, I., P5336
Clark, O. W., 5152
Clarke, W., P5434
Cleveland-Detroit Corp., 5184
Cohen, L., 5252
Coke, C. E., 4952
Collins, J. K., P5425
Collins & Aikman Corp., 5036
Colton, B., 4928
Colwell, C. E., 5121
Cook, J. G., 4923
Corah (N.) Ltd, P5397
Corn Prods. Co., P5340
Courtaulds Ltd, 4998, 5043, P5296, P5437
Creegan, H. F., 5067
Crewther, W. G., 5262
Croon & Lucke GmbH, P5312
Crosby, P. M., 5155
Cumberbirch, R. J. E., 5238, P5389
Dal Monte Casani, D., 5224
Dann, O., P5391
D'Aria, L., 5224
Das Gupta, S., 5109
Datye, K. V., 5157
Davey, D. J., P5362
Davis, A. E., 5088
Davis, D., 5271
Davis, F. V., 5158
Dawson, T. L., P5427
Dayco Corp., P5301
Deal, L. A., P5317
Dean, B. T., 5233
Deans, F. E., P5370
Deans, H., 5178
De Biro (A. P.) & Co. Ltd, P5443
Decossas, K. M., 5130
de Dani, A., 5057
Deering Milliken Res. Corp., P5310
de Groot, A., 5006
Delany, J. L., 4927
Delasanta, A. C., 5214
Demint, R. J., 5099
Demonmerot, N., 5263
Dennis, D. T., 5243
Denton, M. J., 5205
Dessau, H. S., P5386
Deutsche Gold und Silber Scheideanstalt, P5381
Devillers, N., 4965
Dewas, R., P5351
Dick, J. B., 4930
Dietrich, H., 5050
Dlugosz, J., 5244
Dobson, A., P5304
Doran, M. A., 5253
Dow Chem. Co., 5116, P5404
Dowling, G., 5169
Dowling, L. M., 5262
Downes, J. G., 5183
Drabert-Kettling & Braun, 5096, 5176
Drew (E. F.) & Co., P5409
Dunlop Rubber Co. Ltd, P5384
du Pont (E. I.) de Nemours & Co., 4942, 4995, 5047, 5104, 5111, 5235, P5286, P5385, P5395
Durham, K., 5246
Dutton, W. A., 5272
Earland, C., 4933
Earnshaw, J., P5393
Eastman Kodak Co., P5413
Easton, B. K., 5084
Eastwood, C., 4955
Efremov, E. D., 5007, 5009
Egelhaaf (C. C.) KG, P5352
Eggensberger, B. E., 5272
Eirich, F. R., 5249
Elliott, R. L., 5260
Emens, S., Jr., 5271
Enrick, N. L., 4969, 5227
Epstein, M. M., 4947
Fabrique Nationale, 5027
Fair, E. W., 5023, 5236
Faye, T. F., 5045
Ferber, K. H., 5119
Ferralon Plastics, 5056
Fiedler, K., 5142
Fields, J. E., P5338
Filicheva, T. B., 5217, 5219
Finger, G. G., 5001
Fiori, L. A., 4963
Firestone Tire & Rubber Co., P5400
Fleissner & Co. GmbH, P5392
Flis, I. E., 5085
Foister, Clay & Ward Ltd, P5366
Fong, W., 5114
Ford, B. H., P5362
Forsell, R. A. P., P5327
Foter, M. J., 5107
Fraenkel, M., 5272
Freudenberg (Carl) KG, P5387
Frey, W., 5222
Frishman, D., 5055, 5060
Frolov, S. S., 5239
Fuqua, R. E., P5367
Gaertner, V. R., 5120
Gagneux, M. R., 5140
Gambus-Gabarro, E., 5100
Geigy (J. R.) AG, P5431
Geller, A. A., 5135
Gelo, J., 5241
Gentile, A. H., P5325, P5326
Ghosh, S. K., 4962
Gibbs (R. Darton) & Co. Ltd, P5324
Gillespie, C. G., 5283
Gillespie, J. M., 5264
Gillet, J., P5294
Gillet-Thaon Etab., P5432
Goldberg, J. B., 4948
Goodings, E. P., P5285
Gracie, P. S., P5337
Grangie, P. R., P5307
Grant, J. N., 4924
Gray, F., 5271
Greuel, M., 5199
Grignet, J., 5204
Habel, O. F., 5167
Ham, A. F., 5053
Hamilton, C. W., 4947
Hanseatische Motoren GmbH, P5303
Harder, H., 5108
Hardy, J., 5276
Harms, A. M., P5373
Harms Hosiery Co. Inc., P5373
Harris, J. C., 5247
Harrison, W. J., 5261
Hartenhauer, H.-P., 5192
Hartley, K. A., P5296
Hashimoto, M., 5266
Hearle, J. W. S., 4940, 4999
Heliot Co., 5148
Henning, H.-J., 5202
Herbulot, G., 5148
Hermans, P. H., 5240
Herminge, L., 5220
Hewit, F. G., 5128
Hickson & Welch Ltd, P5396, P5401
Hildebrand, D., 5182, 5218
Hiller, H., 5087
Hilton, T. B., 5210
Hirtz, M., 5218
Hobourn F. N. F. Ltd, P5360, P5361
Hoechst (Farbwerke) AG, P5287, P5414, P5417
Hoffman, M. T., 5065
Holden, R., P5318
Holland-Bowyer, W., P5384
Holm, C. J., P5333
Honegger, E., 4957
Hooper, C. W., P5297
Hopley, M. G., P5324
Hosiery & Allied Trades Res. Assoc., P5368
Houska, J., 5005
Hunter (Jas.) Mach. Co., 5076
Hurst, W. M., 4925
Illingworth, J. W., P5368
Imp. Chem. Inds. Ltd, P5285, P5289, P5294, P5390, P5393, P5416, P5421, P5424, P5425, P5427, P5434, P5438
Ingenious Mechanical Prods. Ltd, P5354
Ingham, J., 4966
Innes, R., 5038
Interchemical Corp., P5439
Jackson, B. C., 5271
Jacobi, E., P5320
Jarolimek, F., 5083
Jersey Fabrics Ltd, P5386
Johnson, A. J., 5088
Johnson, J. H., P5338
Jones, D. E., 5053
Jordan, B. J., 5260
Justice, J. D., 5216
Karkoska, W. R., P5299
Karm, R., 4957
Karpov, L. I., 4975
Katorzhnov, N. D., 4944
Kennewell, H., 5272
Kern, F., 5143
Keyser, J. J., P5311, P5322
Kharkharov, A. A., 5077
Khorkova, O. G., 5001
Kimberly-Clark Corp., P5382
Kinapenne, J., 4956
King, R. A., P5325
Klein, J., P5353
Kobayashi, Y., 5265
Koch, H., 4934
Koch, P.-A., 5063
Koppelman, E., P5349
Koyano, K., 4939
Krantz, H., P5428
Krantz, W., P5428
Krasovitskii, B. M., 5154
Kratky, K., 5173
Krazer, B., 5153
Kropf, R. T., 5072
Kunsch, G. W., 5063
Kuwabara, K., 4994
Lacy, R. E., 5079
Landau, L., P5394
Lang, W. R., 4929, 4990
Lassé, R., 5196